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by Dan Ellis

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The Reader is also encouraged to send photographs, maps, and or, diagrams. These will be returned upon request.
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The Author -- Dan Ellis
225 Fairway Drive, Pass Christian, MS 39571
(601)452-3138 or Fax (601)452-2499

email: danellis@datasync.com
danellis3@juno.com
Web Site – danellis.net

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PREFACE

The Book -- by Dan Ellis

Most of my previous books on histories of Gulf Coast towns and cities were produced for educational and cultural benefits concerning the wonderful heritage of the Mississippi Gulf Coast. This book, however carries an additional message – one of urgency in the endeavor to eliminate complacency.

Gulf Coast citizens constantly need to be made aware of the potential danger of living on this cherished land – with caution and preparedness – not fear.

Additionally, state and local governing officials must provide the evacuation routes and roadways that are so sorely necessary for an enlightened citizenry to respond to the call to safety.

The Ultimate Weather Man Nash Roberts spoke at a Biloxi 30th Anniversary of Hurricane Camille fund raiser, stating, "If there is one thing we have gotten from all of this," he said, "I hope it is to go north – get away from the water."

"As for evacuation," in 1994, Civil Defense director Wade Guice stated, "We've got more traffic with the same roads to put them on and more people – I'm hoping to get Mississippi 15 open all the way to Tennessee, but it's not going to happen in my lifetime."

Before his death in 1998, Wade Guice estimated that, "it would take 12 hours to chase residents and tourists off the Coast – and traffic would be a nightmare."

Hopefully this book will be treated for its historic value on what happened to the cities along the Gulf Coast – in addition, that it be used as a guide to planning and preparedness for the younger and the newer members of our citizenry. Wade Guice was convinced that those working and living on the Coast today, "have no feeling for the lethal nature of such a major hurricane, despite a parade of recent killer blows like Hugo and Andrew." "They have not the foggiest idea," he said, "Most of the veterans (of Camille) are gone."

ooo

The material gathered from the earliest historic incidents was garnered from many resource documents and interviews. Much of the information was sifted from newspaper clippings amassed in the *Billy Bourdin Historical Collections* which produced some interesting material to work with. Almost all of the photographs were also selected from Billy Bourdin's files. Also, very helpful, were the staff members of Hancock and Harrison County Public Library systems. A special note of appreciation is extended to Jimmie Bell for his feature story, "A Tribute to Wade Guice."

The Cover -- Camille's wrath upon Scenic Drive

This 1969 Pass Christian viewing of Scenic Drive shows building damages and the total destruction to beach side businesses that were reduced to piles of debris 10 to 12 feet high. The cover's annotated text was created by Jessie Heitzmann.

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Reference Sources from the Billy Bourdin Historical Collection

Periodicals and Newspapers

The Sun Herald
Kat Bergeron
Ken Fink
Patrick Peterson
Pam Firmin
Cara Owsley
Tim Isbell

The Sea Coast Echo
Ed Lepoma

The Daily Herald
Robert McHugh
Richard Glaczier
Ted O'boyle
Fred Hutchings
Ron Elias
Ted O'boyle
Jim Lund
Bill Dennis
Billy Ray Quave

The Tarpon Beacon
Parnell McKay

The Times-Picayune, New Orleans
Elizabeth Mullerier

The Advocate Newspaper, Baton Rouge
Joe Gyan Jr.

Photographs

Ron Elias
Bob Hubbard
Joe Scholtes
Sun Herald Files
Fred Hutchings
Chauncey Hinman
Wally Hill
Bill Dennis
William Dennis
Chuck Francis

USM Oral History Program
Interviews by R.Wayne Pyle
Documented by Phil Hearn

Publications

- *Hurricanes of the MS Gulf Coast,* by Charles Sullivan,
- *Camille a Flash Back - 1969,* by Jimmie Bell
- *Camille" – A Hurricane,* by Graphic Press
- *Camille and the Gulf Coast,* by Dennis E. Holston
- *Miss Camille,* by Irma Reinke

Federal Publications

- U.S. Department of Commerce, ESSA's Climatological Data, National Summary, Volume 20, Number 8, 1969
Authors: Richard M. DeAngelis, Environmental Data Service, ESSA, and Elmer R. Nelson, Office of Hydrology, Weather Bureau, ESSA
- FEMA and NOAA's National Climatic Data Center
A Summary & Analysis of Hurricane Camille (August 5th-19th, 1969)
Hurricane Research Project – by Tomas Cosenza's, 1998
- Hurricane Hunters by Mr. Jeffrey Long and Scott Gibbins

The Gulf Coast Shall Rise Again!

In the 30th Anniversary reporting of Camille, Sun Herald Chronicler, Kat Bergeron recalled that she was one "among the 239,786 fortunate souls of 1969, who survived the eight-hour storm period. Injured casualties were as high as 9,500. From the three Mississippi Gulf Coast counties, a roll call of 128 names were identified and matched with 128 storm-battered bodies. Additionally, there were three unidentified females who were symbolically buried at Gulfport, named – *Faith, Hope, and Charity* – bringing the total to 131 dead.

Presumed to have been swept out to sea with the receding storm surge waters were at least 27 more victims who continue to be listed as missing. To many Coastians, August 17, 1969, was *The Day the World Stopped!*

During the immediate past decade, community progress and personal economic stability has greatly improved. However, when the Gulf Coast entered the '70s and the '80s, economic conditions for many was still that of hardship – endured throughout a long and beleaguered recovery. Not since the Reconstruction Days and the Big Depression of the '30s, had Gulf Coast residents been so challenged.

New Orleaneans who had always made their escape to the Mississippi Gulf Coast opted instead for new playgrounds further east. In 1970, Interstate 10 was opening up stretches of completion. Thousands of Louisianians from New Orleans and Baton Rouge areas, having been denied their customary coastal playgrounds due to Camille's destruction, sought new Gulf Coast territories. It was a four hour drive to Florida, but this didn't stop the weekend migrations. Because of the extensive national news coverage concerning south Mississippi's destruction, the Mid-western "Snowbirds" also flew on to new landing zones.

However, there was an early land development success story that took place in Hancock County with the opening of Diamondhead, a lavishly marketed high elevation resort with golfing facilities, condominiums, and inexpensive land sales. The Diamondhead investors wanted to capture the parade of cars that was passing by – so they fought hard for the front-door completion of a cloverleaf infrastructure at Interstate-10. The Diamondhead Interchange at I-10 and Gex Boulevard when finally expedited in 1972, allowed "Paradise" to come alive for its developers.

Chef Bill Vrazel prepared gourmet dishes that were touted as "out of this world." His extensive menu satisfied the palate of everyone who dropped in at the Diamondhead Country Club and new Yacht Club.

As the whole Gulf Coast watched this phenomena, it was clearly understood that Glitz and Gaming were the only tools available to tame the tide of tourists that was flowing through the former Gold Coast to Florida's emerald shores. It took Gulf Coast bankers, realtors, merchants, the Chambers of Commerce, Restaurant Association, Tourism Agencies, and every element of political and economic fiber to make the come back a reality.

The Coast leadership pursued a concentrated growth plan and ultimately, during the decade of the '90s, the rejuvenated Gulf Coast not only had made its "come back," but is now bursting with pride and vitality to escalate its position as a national resort attraction.

With the reentry of gaming houses to the Gulf Coast, now legalized with the full support of State government, the Mississippi coastal area has risen once more as the Phoenix from its ashes. Once again it has become the uncontested Gold Coast. During this growth period, the prosperity of the gaming portions of the Mississippi Gulf Coast has become akin to that of Las Vegas. With the glitz and ritz of neon and lazar lights; and the panorama of fireworks; in addition to the blitz of people arriving daily by car, van, rail and air – the economic climate has become fantastic.

New face lifts have been put on many of its communities. Transportation access by Hwy 90 across the coast line – Hwy 49 from Jackson to Gulfport – Hwy 603 from the Kiln to Waveland and Bay St. Louis – Hwy 63 and 613 through Moss Point and Pascagoula – all are being addressed or have completed highway widening, lighting, and establishing interchange tourist commercial complexes that are brimming with new motels – and with flags waving. All of Gulf Coast Country has a filled agenda of annual events befitting every occasion for every month of the year. New celebrations and festivities are announced ever more frequently.

Counties and cities have renewed their emphasis on rejuvenation programs and have accelerated their efforts in downtown revitalization, city beautification, historic preservation, and the hiring of professional expertise for each endeavor. The Gulf Coast has become proactive and has taken an aggressive stance with an added emphasis on facelifting, rebirth, and redevelopment centered on each city's overall structural landscape.

Joining with the staffs of government is the active participation and support by local volunteer groups as well as contributing individuals. Following a very healthy agenda of closing out 300 years since the founding of the Gulf Coast, there was an abundance of activity events engendered by regional Tricentennial programs. Historic markers and bronzed statues were strategically placed. The Gulf counties are engrossed with numerous plans, such as a "Tree City USA," a "Main Street Community," a "Millennium City," a "Flagship City," a "Disaster Resistant Community". These are in addition to "Beautification Programs" and Landmark developments such as reconstructing and reenforcing Lighthouses.

A community's quality of life is excelled upon with its emphasis on education, health, modes of transportation, in addition to trust in its governing officials and community leaders.

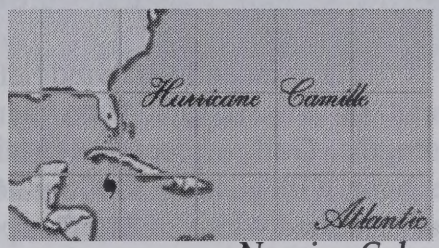
The Gulf Coast Shall Rise Again! Such was and is the determination and spirit of Mississippi Coastians.

However, while Civil Defense units continue to promote hurricane preparedness, there is still the underlying and immediate need for Coastians to press their governing officials to expedite and seek funds to provide a secure transportation system of corridors that will afford safe and quick response evacuation routes.

It is with this expressed need that this book ***"All About Camille"*** was written.

Camille was Real

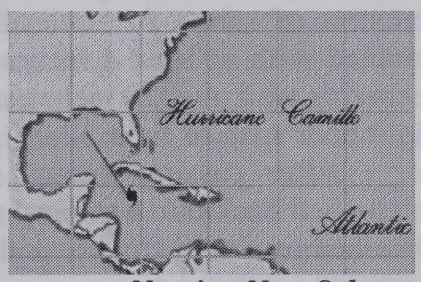
A small tropical wave exited the continent of Africa on August 5th, 1969. The wave was poorly organized and presented little threat to any land masses. On August 9th, the wave, which developed into a V-shape, was recognized as a tropical disturbance, but still presented little threat to any land masses, being situated about 480 miles east of the northern Leeward Islands. The next day, the disturbance passed over the Leewards, dropping moderate amounts of precipitation, but little else.



Nearing Cuba

Once this disturbance entered the Caribbean, though, it showed signs of increased curvature and banding. By the fourteenth reconnaissance flight into the collection of storms, a central pressure of 999 milibars was detected, along with sustained winds of 55 m.p.h. The disturbance was then given the name "Camille." Camille's intensification occurred mainly in the Caribbean, south of the islands of Cuba and Hispañola. Late on the 14th of August, the central pressure had lowered to 991 millibars, followed the next day by a pressure reading of 964 millibars. By this time, Camille had sustained winds of over 115 miles per hour, located just 60 miles east of Cape San Antonio, Cuba.

Camille made landfall for the first time as a hurricane on the 15th of August, striking the western tip of Cuba. The storm dumped 10 inches of rain and reportedly killed only 3 people. It was after the first landfall that Camille reached the warm Gulf of Mexico.



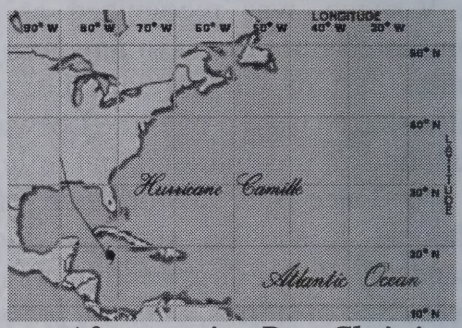
Nearing New Orleans

The storm was very compact, leading early analysis of satellite data to assume the storm lacked a great amount of strength. John Hope of the "Weather Channel" discussed the recent development of satellite reconnaissance in meteorology. He said forecasters didn't expect much from Camille at that time, due to the storm's relatively small size, however, once reconnaissance aircraft penetrated the storm on the 16th, they learned that size was not indicative of strength. The central pressure had dropped to an unbelievable 908 millibars on the 16th, as the collection of storms quickly intensified. Hurricane watches were soon disseminated, stretching from the panhandle of Florida to Biloxi, Mississippi.

Later that day, an Air Force reconnaissance aircraft recorded a central pressure of 905 millibars and flight level winds of over 160 miles per hour. August 17th was finally marked with hurricane warnings that stretched along the Gulf Coast. Camille lay only 250

miles off Mobile, Alabama. The last penetration flight of the day revealed a central pressure of 901 millibars, with eye-wall winds in excess of 200 miles per hour, and although hurricane-force winds extended a mere 60 miles from the center, Camille was at its intensity peak.

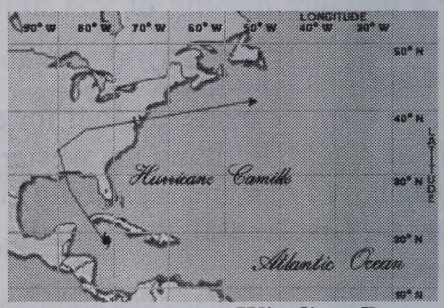
Many forecasters expected the storm to strike the panhandle of Florida, however Camille struck over 100 miles west of the predicted area. Camille made landfall at 10:30 p.m. on August 17th along the Mississippi coast. Camille's winds at landfall were estimated as high as 200 miles per hour.



After crossing Pass Christian

The concentrated wind field had spared many other areas of Mississippi from winds of such powerful strengths. Gulfport received sustained winds of 100 miles per hour, with gusts up to 175 miles per hour, while Biloxi had sustained winds of 81 miles per hour, with gusts up to 129 miles per hour. The highly populated city of New Orleans, Louisiana, had brief gusts up to 85 miles per hour.

As Camille made her way through Mississippi, much of her strength was sapped. Camille registered only as a tropical depression when it reached the northern border of Mississippi. The depression tracked through western Tennessee, central Kentucky, extreme southern West Virginia, and western parts of Virginia. Through its over-land phase, the depression dropped record-breaking amounts of rain. An area of 4,800 square miles was covered with at least 4 inches of rain, with some spots receiving well over 20 inches, all of which occurred in an eight hour span of time.

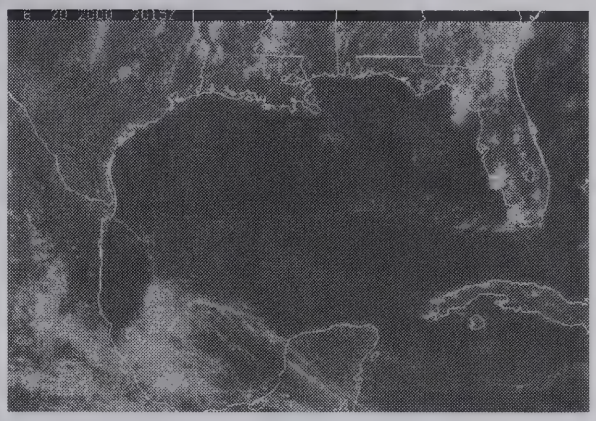


Winding Down

After passing through Virginia, the depression intensified back into a tropical storm over the Gulfstream, only to be absorbed by a cold front over the Grand Banks region.

The Damage Caused by Camille

The worst damage caused by Camille was inflicted by water and not wind. The highest storm surge level recorded along the Gulf Coast was at Pass Christian, Mississippi; with over 24 feet of storm surge. Surges over 5 feet high were noted from Alabama to Louisiana, with the highest values being found along the Mississippi coast. The coastal flooding caused by this giant bulge of water caused devastation and loss of life all along the Gulf Coast. Most people living on the coastline realized the potential threat from Camille, but some residents ignored the calls to evacuate.



The human cost from Camille was only the beginning, as the storm caused more than $1.42 Billion in damage (1969 dollars). The storm wreaked most of its havoc in the state of Mississippi, which alone, suffered nearly $ 1 Billion in damage. The Federal Emergency Management Agency (FEMA) estimated its relief package for areas struck by Hurricane Camille at just below $100 Million, which ranks Camille in the Top Ten costliest hurricanes to the agency. Due to the hurricane's winds, estimated at over 200 miles per hour, Camille is classified as the second and most recent Category 5 hurricane to hit U.S. soil, only surpassed by the 1935 Labor Day hurricane that struck the Florida Keys. Camille's central pressure of 901 millibars ranks it as one of the lowest central pressures in the Atlantic Ocean, and in the upper tier rating reports from all oceans.

Analysis of Lessons Learned

Hurricane Camille was a landmark hurricane for the science of meteorology. Its timing, late 1969, allowed forecasters to get further acquainted with the new development of weather satellites. Camille taught forecasters several lessons which have become important principles today.

First and foremost is the unpredictability of hurricanes. Forecasters expected landfall far from the Mississippi coast line, and therefore did not stress early enough on the importance of evacuating low-lying areas. This lapse in warning the public along those areas that were hit caused some people, like the residents of the Richelieu Apartments to expect little from the hurricane. Those expectations became deadly when Camille altered its path. Today, no matter if a hurricane is a category 1 storm, it still receives the same respect as more severe storms.

Lessons Learned
1. Unpredictability
2. Size
3. Reconnaissance
4. Respect Nature

The second lesson taught by Camille was that size does not affect intensity. Hurricane Camille was not a large storm by any standard, yet its intensity made it one of the most catastrophic storms of the past century. Forecasters today put much more credence on factual data, rather than speculation based on observations.

A third lesson from Camille is the importance of using reconnaissance aircraft in meteorology. The use of aircraft was common for the spotting of hurricanes out at sea, prior to satellite technology. Camille's characteristics demonstrated that aircraft flying through storms provide much needed data that is impossible to get from any other means.

The final important lesson wraps all of the lessons into one theme. Camille taught meteorologists, and citizens alike, to respect the forces of nature. Not only did the wind cause millions of dollars in damages, but the power of water was seen in the most complete way ever. From the tidal storm surge – to the deluge of rains thousands of miles inland – Camille affected not only coastal residents, but also people that had never expected a hurricane, or its remnants, to hit them.

Scientific Gains From Camille

The science of meteorology gained invaluable information from Hurricane Camille. In his article entitled "Killer Storms", for the November (1969) *Bulletin of the American Meteorological Society*, George Cressman describes how forecasting came of age with Camille. Hurricane Camille, of very recent notoriety, had the potential of being the deadliest hurricane of all (1900 – Galveston, 1928 – Lake Okeechobee, 1938 – New England, and Camille – 1969). The total number of fatalities due to this storm is still not determined, however, accurate tracking by weather reconnaissance, expert forecasting, and excellent warning dissemination were responsible for the saving of many lives.

Forecasting Comes of Age.

Frances Parmenter of the National Environmental Satellite Center, wrote in the US Weather Bureau's *Monthly Weather Review* for December 1969, about the use of NASA's geostationary satellite. For several days during the life of Camille, NASA's ATS III geostationary satellite photographed the storm at intervals as frequently as 10 minutes.

The data gathered by those satellite shots, which could be looped to show movement, proved to be invaluable in the post-landfall analysis of Camille. As satellite pictures were compared to observed data from research aircraft, meteorologists were able to discern patterns in the clouds of a hurricane that help to show intensification. One such feature is the presence of a well defined eye, which was indicative of the rapid intensification of Camille. Another important piece of information gained from looking at Camille was the impact of catastrophic storm surges along a developed coastline. In 1984, Dr. Neil Frank, then Director of the National Hurricane Center, testified before the House Sub-committee on "Natural Resources, Agriculture Research and Environment." Dr. Frank discussed the effects of storm surge. Neither wind nor rains significantly threatened great loss of life – the most feared part of a hurricane is the storm surge. Nine out of ten people who die in hurricanes drown in the storm surge. Dr. Frank

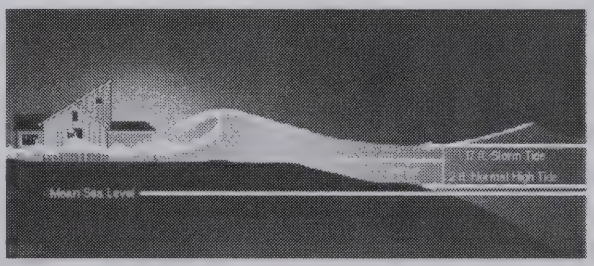
then described exactly what storm surge is and what makes it such a devastating force.

The Storm Surge

The storm surge is a dome of salt water nearly 50 miles wide and 10, 15, or even greater than 20 feet high that sweeps across the coast near the point where the eye makes landfall. It is water well above normal levels that is further topped by huge waves. Barrier islands become completely inundated and the damage caused by continued wave action can be awesome.

The Significance of **STORM SURGE**

In other words, within the eye of the hurricane, due to the low atmospheric pressure, water accumulates and creates a bulge. As the hurricane approaches land, the water level on the land will begin rising, until just before the eye comes ashore, when the bulge of water causes water levels to rise rapidly. To exacerbate the situation, on top of the bulge of water – are waves – when combined with the surge – becomes a very destructive force. On beaches, after the water level has risen past where homes and buildings are located, the waves on top of the bulge begin crashing over the structures, until they collapse.



This is what happened with the Richelieu Apartments. Once the storm surge came ashore, waves collapsed the buildings, drowning many within the structures along Beach Boulevard.

Benefits Derived

In the long view, Hurricane Camille proved to be one of the most powerful storms ever recorded. Not only did it provide the science of meteorology with an opportunity to study and learn, but it also allowed analysis of satellite imagery to discover new ideas and to disprove prior misconceptions. The cost of these lessons was extremely high, both in human and financial terms, however future generations have gained much from Camille. Coast residents learned to respect nature as an awesome force and are now much more likely to heed warnings from forecasters and civil defense officials. The lives of the hundreds of those who perished cannot be regained, but their sacrifice secured a greater safety for those they left behind.[1]

Opportunity to Study and Learn

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[1] *(The preceding information and analysis of Camille was proffered by Tomas Cosenza, Hurricane Research Project of 1998, and the U.S. Department of Commerce, ESSA's Climatological Data Division.)*

Pressure Measurements

Camille's lowest pressure of 901 millibars (26.61 inches) was second only to that of the Labor Day Hurricane of 1935, in which a 26.35 inch (892 millibar) pressure was recorded in the Florida Keys. This stands as the lowest pressure in the North Atlantic; the world record low pressure was recorded in typhoon Ida on September 24, 1958 – 877 millibars (25.90 inches).

The 908 millibar pressure recorded on the afternoon of August 16th marked the lowest ever recorded by reconnaissance aircraft in the North Atlantic; however, this was soon broken by the 905 millibar reading later in the day and the historic 901 millibar pressure the following day.

The lowest land pressure was observed by Mr. Charles A. Breath, Jr. of Bay St. Louis, in his home a few blocks from the west end of Bay St. Louis Bridge. He made the reading of 26.85 inches on his aneroid barometer as the eastern edge of Camille's eye passed overhead. His barometer was later checked and found to be accurate by the New Orleans Weather Bureau Office. Other low pressures included a 27.80 inch reading at Garden Island, Louisiana, and 27.90 inch at St. Stanislaus School in Bay St. Louis.

The lowest land pressure was observed by Charles A. Breath, Jr. of Bay St. Louis, in his home a few blocks from the west end of the Bay St. Louis Bridge.

The Devil and the Storm Surge

The storm surge generated by Camille had flooded coastal areas from lower Plaquemines Parish in Louisiana to Perdido Pass, Alabama. Flooding was most severe in the Pass Christian - Long Beach, Mississippi, area where tides up to 24.2 feet above M.S.L. were measured. In the Bay of St. Louis, maximum tides ran 18 feet above M.S.L., while in the Back Bay of Biloxi they were about 15 feet above M.S.L.

Maximum tides of 10 feet or more above M.S.L. extended from the Pearlington area to near the Mississippi - Louisiana line. Maximum tides of 15 feet or more above M.S.L. extended from Clermont Harbor to Ocean Springs. Maximum tides of 20 feet or more above M.S.L. were concentrated in an area from Bay St. Louis eastward to Edgewater Park in West Biloxi. The highest measured surge of 24.2 feet above M.S.L. was measured within the city limits of Pass Christian; other measurements of 22.6 feet and 22.5 feet were also found at Pass Christian. Tides within the preceding ranges were lower in some areas. Flooding was also prevalent along rivers and bayous in Mississippi. Tides ran 13-17 feet above M.S.L. from the Jourdan River (Waveland) to Old Fort Bayou (Ocean Springs).

Flooding was most severe in Pass Christian - Long Beach, Mississippi, area where tides up to 24.2 feet above M.S.L. were measured.

Offshore surges were put at 15-16 feet above M.S.L. based on the flood marks measured at Ship and Cat Islands. The Coast Guard reported every buoy between New Orleans and Mobile was off station and that almost all of the navigational aids had been lost. In the Mobile Bay area tides ran about 7 feet above M.S.L.

The Louisiana storm surge that swept from Empire southward, flooded Boothville with 15 feet above M.S.L. of water. Water levels reached 9 feet near the mouth of the Mississippi, at Garden Island. The tidal Surge also flooded some parts of lower St. Bernard Parish and eastern sections of Orleans Parish. Tide heights reached 7.97 feet above M.S.L. at Alluvial City, 8.73 feet at Chef Menteur Pass, 11.06 feet at Shell Beach, and 9.00 feet at the Rigolets. Tides on Lake Pontchartrain reached 4.0 feet above M.S.L. at Mandeville, 4.6 feet at Freneir, 5.2 feet at Slidell, and 5.5 feet at Madisonville. [2]

The tidal Surge also flooded some parts of lower St. Bernard Parish and eastern sections of Orleans Parish.

Deaths and Damages

Hurricane Camille ranks high as one of the most destructive killer storms ever to hit the United States. Total damage has been estimated at $1.42 billion with 258 deaths and 68 additional persons missing -- this includes the Gulf Coast and the Virginias. In round figures, the damage equals the destruction caused by Hurricane Betsy in September of 1965, but in a much more concentrated area. Nevertheless, Betsy and Camille stand together as the two most destructive storms ever to ravage the U.S.

While most of Betsy's damage was incurred in Louisiana, Camille's wrath was spent in Mississippi. Loss estimates to Mississippi were established at $950 million; while mostly the lower parts of Plaquemines Parish in Louisiana suffered damages reported at $350 million.

The total U.S. deaths figure was 258 with three persons reported dead in Cuba. The U.S. figure is the highest in a hurricane since the 390 victims of Hurricane Audrey, which moved over western Louisiana in June 1957; most of those deaths, like the ones in Camille, were due to drownings.

From Pascagoula to Pass Christian, piles of lumber, building materials and trees were thrown together by the Storm Surge.

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[2]*(The aforementioned facts were extracted from documents of the U.S. Department of Commerce, ESSA's Climatological Data Division and its Weather Bureau Division)*

Camille ripped a swath of destruction along the entire length of the Mississippi coast up to three or four blocks inland. She also destroyed some inland areas such as residential sections of West Gulfport and D'Iberville, which at that time was not yet chartered as a City. From Pascagoula to Pass Christian, and to a lesser degree farther east and west, piles of lumber, building materials and trees were thrown together by the surge. In some cases, piles of debris extended for more than a block square. Highway 90, the main coastal thoroughfare, was covered with sand in many sections and completely washed away in other sections.

There was electric power failure throughout 14 counties, from the coast to as far north as Simpson County. In some sections this loss lasted for several days. The effect on the Mississippi Power Company was a badly damaged transmission network and almost a total loss to their distribution system which had to be almost completely rebuilt.

Camille's effects were also devastating on telephone service. Of Mississippi's 765,000 telephones, approximately 15 percent were out of service. In the Gulf Coast area this figure was 67 percent without service.

The U.S. Forest Service made an aerial survey over a 14 county area of southern Mississippi, an area of 3.8 million acres, which revealed that about 1.9 million acres of commercial forest land in 12 counties received varying degrees of damage. Observations from the air indicated that hardwood forests suffered somewhat heavier damage than pine forests. Some of the hardwood forests were completely defoliated by severe winds. The Forest Service estimates damage to Mississippi saw timber at 1.8 billion board feet and to pulpwood at 1.4 million cords. Besides agricultural and timber losses, there were 8,000 heads of cattle that were drowned or maimed and had to be killed.

As the storm affected the Mississippi Gulf Coast, about one-third of the Bay St. Louis Bridge and one-half of the Biloxi-Ocean Springs Bridge were damaged when tides lifted the spans off their supports. The Army Corps of Engineers indicated that to make some 530 miles of roads passable, about 100,000 tons of debris had to be cleared away.

M. James Stevens, famed for his Gulf Coast history files, was vice-president of the Mississippi Restaurant Association. He reported that the Coast's resort industry suffered the worst disaster of any similar recreation area in the world. Along U.S. Hwy 90, in the Biloxi area, some 60 resort properties suffered damage with about one-half of them destroyed. Only buildings situated on high knolls of above 20 feet were able to weather the high winds and survive the

M. James Stevens, famed for his Gulf Coast history files, reported that the Coast's resort industry suffered the worst disaster of any similar recreation area in the world.

storm surge. Many buildings at the 10 feet level were crushed.

In the Gulfport harbor, damage was severe. Large cargo ships, *the Alamo, the Victory, the Hulda, and the Silver Hawk,* were badly damaged and washed high aground at the north end of the harbor. At the banana wharf, all the sheet metal was stripped from the structures, but most of the framework was intact. On the west side of the harbor, most of the damage was to the lower walls of the buildings where the battering-ram effect of floating cargo carried the sides away. A large diesel fuel barge was lifted out of the harbor, carried ashore, and deposited in the middle of U.S. 90. Farther up the beach was a large oil storage tank that had floated several miles from its original position.

Ships run ashore

The beautiful, modern marina fronting the Broadwater Beach Hotel at Biloxi suffered damages to its molded concrete covers atop the boat slips. Buildings along the waterfront were demolished and many of the boats were either sunk or had been washed away.

At Pascagoula's Ingalls Shipyard, the large cargo ship, *Mormacsun*, which was under construction, broke its moorings and was carried onto high ground by a 12 foot rise of water.

In Hancock County most residents live in low-lying areas. In the hamlets of Lakeshore, Clermont, Pearlington, Ansley and the Cedar Point section of Bay St. Louis, destruction was almost complete. Storm surges of 15 feet and higher and devastating winds turned beach houses into stacks of driftwood.

At Clermont Harbor, the destruction was total, and eastward to Bay St. Louis many hundreds of beach homes were destroyed. Henderson Point in the Pass Christian area was completely destroyed.

At the Mississippi Test Facility, southeast of Picayune, some 1600 refugees took shelter Sunday night (17th). The high winds and water knocked down some overhead power lines and flooded the underground lines. Emergency generators were put into use but operations at the facility were suspended until Tuesday.

In Pearl River County there was an estimated $35-40 million loss from damage. The county agent said that about 85 percent of the dairy barns in the county were either severely damaged or were a complete loss. About 35,000-40,000 acres of bearing tung trees were destroyed. There was an additional loss in timber and heavy damage was inflicted on the pecan crop. In Poplarville, the county seat, the mayor estimated that about 90 percent of the homes sustained damage in varying degrees.

Damage in Louisiana was confined mainly to southeastern sections with some damage in the eastern part of the state. The storm

surge generated by Camille swept the area from Empire southward clean. Most structures in this area, including some that had survived hurricane Betsy, were completely demolished by the combination of wind and water. The tidal surge also flooded some parts of lower St. Bernard Parish and eastern sections of Orleans Parish. Camille's intense winds were unusually small in areal extent, particularly to the west of the center. Damage in these areas was generally minor. However, eastern sections of St. Tammany and Washington Parishes were swept by intense winds and heavy rainfall (4-6 inches), and the heavily forested area received considerable damage. Extensive property damage resulted from trees falling on homes and businesses, utility lines and roads.

An aerial survey of the Mississippi River showed 94 ships were sunk or grounded near the mouth of the river. Of these, 65 were barges, tugs and offshore crew-boats that were pushed up atop a river levee.

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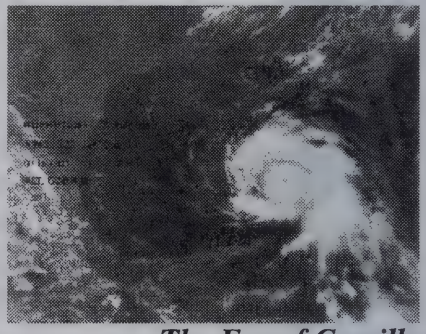
A Heritage of Hurricanes

If you have never run to the shores to feel the brunt of hurricane wind, you've never experienced one of the biggest thrills in living near the Gulf Coast. Salt-water sprayed from the pounding surf is exhilarating in itself. Nature's Wonders are also Nature's Follies. Needless to say, as many can attest, braving the eye of a powerful hurricane storm is utter foolery.



The Eye of Camille

Hurricanes, are nothing new to residents of the Mississippi Gulf Coast. For decades and even centuries, many Coast families have kept the tradition of gathering with their family or friends in the comfort of the grandparents home or the dwelling that was deemed most safe and comfortable. Folks would gather together seeking one and other's familiar company. It was much like a family reunion – each would bring their treasure bundles and boxes of goodies to spend the night through. There was always plenty of food and cakes, cookies, and candies lending an air of celebration.

Fears would be quelled, particularly of the young ones who would listen to past stories boastfully told of hurricanes gone by. Usually the men would gather in the living room as the women posted themselves in the kitchen, and the kids ran helter-skelter. Radios and televisions were made in good order and kept on as background noises to the nervous chatter and the extended greetings with new arrivals. Telephone calls were made to let everyone know who was present and accounted for and at what location they could be found. There was always the need for someone's medication, a particular battery size,

one of the kid's favorite toys – that would cause one of the young men to rush out to brave the early awakening storm – just to have an opportunity to refresh and get to a store – or home to pick up "vital" supplies. Before the errand boy's departure, one of the older men would always slip a wad of one dollar bills in his pocket with a wink that needed no explanation.

The wait was on. The winds would be checked. The beaches would be checked. The house security would be checked. As hours would pass and the rainfall would drop, and the winds would increase, a notch up of fear would quietly set in. The watch would not be over until the threat would pass.

The men would rehash once more the worst hurricane night that they had ever ventured – which quite often would be the hurricane of '47 or Betsy, depending on their ages.

Until 1953, hurricanes were remembered for the years in which they occurred. The first recorded severe storms during the French colonial control were: 1721, September 13, 1723, and September 11, 1740. During the Spanish Era, they occurred on August 31, 1772, July 10, 1776, August 18, 1779, and August 24, 1780.

During the American influence period we recount: August 19, 1813, August 28, 1819, August 23, 1852, back-to-back were August 29, 1855, and August 19, 1856. After the Civil War, a big one arrived on July 30, 1870, then October 2, 1893, followed by September 22, 1906, and September 20, 1909, which disrupted the streetcar lines along the beach front. The September 29, 1915 played serious havoc all along the Coast followed in the next year on July 5, 1916. A very serious one that destroyed a number of homes along the Coast took place on September 17, 1947.

In 1958, began the naming of hurricane strength storms with lady's names, and then, more recently changed to accommodate both men and women. However, Camille's date will never leave us as it occurred on August 17, 1969. It was a storm of all storms. Other storms such as Betsy, Juan, Frederic, Elena, and Georges, also have placed themselves on the record sheet of damages.

Labor Day Weekend of September 1, 1985, was expected to bring $10 million Coast tourist dollars, but all that flew out the window with Hurricane Elena, who took no lives but left a $352 million bill in Mississippi.

Story of 1909 Hurricane

Story by Charles Wiegand, then of New Orleans and Pass Christian, of his return to the Pass from the Big Easy in 1909.

But as stories go, on the L&N line, the 1909 storm caught the commuter train during the day hours after it had already left Union Station from New Orleans. The train was halted just east of Chef Menteur and the Rigolets stations. The height of the tide rose above the Chef Menteur bridge. Aboard the stalled train, the passengers, many of whom were returning to their places along the Coast

including Pass Christian, suffered drenching rains pouring into the sealed coaches through the cracks around the windows and other unperceived weak areas of the aged wooden cars, in particularly the leaking roof. Eventually, the winds subsided enough for a number of the men to escape the coaches in search of launches to take them back to New Orleans or on to their destinations. Those attempting to reach Pass Christian took a boat that survived the swells to reach Ansley in Hancock County near Lakeshore. They stayed the night on the floor there to be fed crackers and sardines as the only food fare to be found.

As one gentleman recalled, the next morning they had coffee and started the trek to Waveland by way of the train tracks. They encountered snakes and alligators along the way. After hiring a buggy at Waveland, they arrived at the Bay St. Louis to find that part of the bridge had been knocked down by the battering of a run-away steel barge. A hired skiff brought them to Henderson Point at the hardest. Needless to say that the remaining walk home to the middle of Pass Christian was hardly tolerable.

B.C. – Just Before Camille Struck

The Daily Herald newspaper, prior to becoming the Sun Herald, made the following daily weather forecasts for August, 1969:

- August 12 – Clear to partly Cloudy – No important Temperature Changes
- August 13 – Clear to partly Cloudy – Widely Scattered Thunderstorms
- August 14 – Partly Cloudy thru Friday Widely Scattered Afternoon Thunderstorms
- August 15 – Partly Cloudy and Warm thru Saturday – Widely Scattered Afternoon Thunderstorms
- On the Front Page was also a Weather Map of the Carribean with an Arrow pointed at Cuba

Category IV or V Hurricanes

Two Category V Hurricanes have hit US States in the 1900s
Hurricane Camille --1969 - Mississippi
Unnamed Hurricane: --1935 - Florida Keys

Fifteen Category IV Hurricanes hit US States in 1900s
Hurricane Iniki September 1992 – Hawaiian island of Kauai; about $1.8 billion damage; 7 deaths.

Hurricane Andrew August 1992 – Florida and Louisiana; approximately $27.0 billion damage; 58 deaths.

Hurricane Hugo September 1989 – South and North Carolina after hitting Puerto Rico and the U.S. Virgin Islands; more than $9.0 billion damage (about $7.1 billion in Carolinas); 86 deaths (57--U.S. mainland, 29--U.S. Islands).

Hurricane Carla 1961 - Texas
Hurricane Donna 1960 - West Coast of Florida
Hurricane Hazel 1954 - North Carolina/Virginia
Hurricane Audrey 1957 - Louisiana

Unnamed Hurricanes:
1947 - Texas/Southwest LA/MS
1932 - East Texas
1926 - South Florida
1919 - Florida Keys
1919 - Texas
1915 - Texas
1915 - Southeast Louisiana
1905 - Southeast Louisiana

Information Source: FEMA and NOAA's National Climatic Data Center --: September 13, 1999

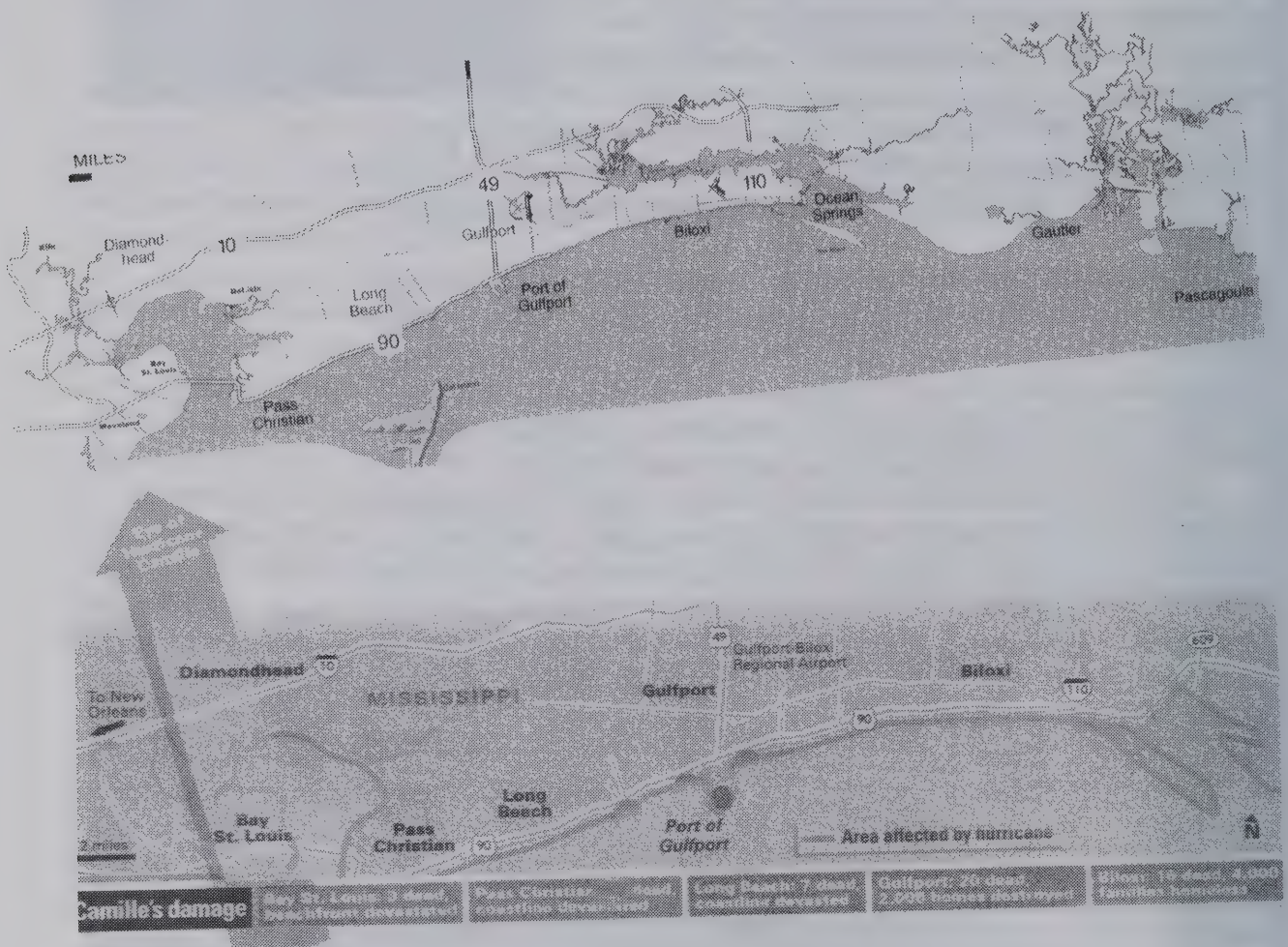
- Sub-Headline stated: "Camille Packing 100 mph Winds Moving on Cuba"
- Associated Press Writer Ben Funk reported from Miami – "Hurricane Camille, her winds up to a howling 100 miles an hour and growing stronger, thrashed slowly toward Cuba today and posed a threat to Florida and the highly exposed chain of Florida Keys."
- August 16 – Front Page Headline – "Hurricane Watch Posted for Coast Area"
- An updated weather map showed the shaded area of the "Watch" that was posted from Biloxi on the west to St. Marks, Florida on the east. AP Writer Ben Funk reported from Miami about the "Watch" area.
- A second article was written by Daily Herald reporters Jim Lund and Richard Glazier under a heading titled, *"Coast Area Preparing if Camille should Hit."* The reporters stated that Coast residents should closely watch hurricane advisories and local reports for further details. Included in the article informed that the Harrison County and Biloxi Civil Defense offices had been activated."
- "County Civil Defense Director Wade Guice stated that an executive committee meeting which included members of the Board of Supervisors and the Gulfport City Council was scheduled for 2 o'clock p.m. (that Saturday.) Wade Guice announced that the Weather Bureau had advised him that there was "no chance" that a Saturday night evacuation of low lying areas would be necessary."

Sunday Morning

As evidenced on Sunday morning, the tropical storm of a few days past, had quickly transmogrified over the past several days and became an unbridled and omnipotent Hurricane named *Camille.*

Seemingly confusing and unreliable weather forecasting and reporting was finally made real to the unwary Gulf Coastians.

Earlier that day, the last of the tourists, mostly from New Orleans and other parts of Louisiana, had started streaming homeward, thinking to protect their properties as the storm was reported to be headed dead center of New Orleans.



Sunday Noon – the 17th

By noon Sunday, the broadcasters were finally forecasting a Mississippi intrusion. The winds picked up and the "people traffic" picked up as well in the more cautious ones taking flight to safer havens. Many of whom felt it was better to save their lives than to worry about their homes and property. But, there were thousands and thousands who remained.

At that time, for "News and Weather" reporting, Coast residents were still heavily tuned in to New Orleans stations – Channel "4" WWL and Channel "6".WDSU. Coast Station WLOX broadcast both with radio and television which had just gotten started in 1962. When the WLOX-TV tower went out, it was their radio station that was able to continue broadcasting blow by blow descriptions of storm happenings until shortly after 10:00 p.m. when all electricity went out along the Coast.

A Former mayor of the City of Pass Christian was Steve Saucier, who at the time of Camille was program director for WLOX-TV 13. He remained at his post until the electricity cut them off the air. A quarter century later, he stated that there was a great coming together of folks along the Coast as they shared in their misfortunes.

Rescues in the Night

Thousands of lives were saved across Coast by round the clock Military efforts. The Eighth Coast Guard District started early with a busy day. On Sunday afternoon, helicopter crews had saved 30 construction workers stranded on an offshore platform in Lake Charles. The rescues were described as "harrowing."

Coast Guardsmen evacuated the more serious patients from the hospital at Bay St. Louis as rising waters surrounded the complex. During the rescue missions, the Guard lost its stations in Gulfport and at Pascagoula in addition to more than $1 million in equipment. Still, they went out on rescues, inspiring President Richard Nixon to write that they had "responded to the extraordinary challenges of Camille with both courage and resourcefulness."

As the picture unfolded, those who were rescued were indeed lucky. Hundreds and hundreds of others near water had to fend for themselves, retreating to attics and rooftops, grabbing onto floating trees, dodging debris as dangerous as bullets.

Some of the weekend soldiers who unwittingly found themselves on the Coast for Camille received commendations and medals for heroism. Some were Guardsmen who countered-manned their orders when told to take shelter – instead – they continued to seek out and carry Camille victims to safety. They were sent out on patrol in aiding the evacuation process to local Civil Defense designated shelters. There were many who refused to bide the instructions. In those cases an exasperated National Guardsman was reported to say more than once,."If you will not go, give me the names of your next of kin so they can claim your bodies," In the wee hours of Monday morning, in the height of Camille's fury, National Guardsmen here on their regular weekend-warrior routine set out in amphibious vehicles to pluck more than a 1,000 soaked, battered victims from trees, roof tops and utility poles. But they could not rescue them all

.The Aftermath

Pass Christian above, Gulfport below.

At first light Monday, hundreds of residents poured from their homes to assess their damages, many of whom had to orient themselves to unrecognizable surroundings. Here and there were buildings that seemed familiar, neighboring lots were vacated of their structures that could no longer be defined by the streets which surrounded them.

Mississippi's 26 mile stretch of Gulf shore along US Hwy 90 was devastated – piled high with debris. Mile after mile of beachfront showed nothing but wreckage and destruction. Boards, broken window sills, twisted metal siding, roofing, ripped signs, and dissected vessels littered the former scenic highway. Camille showed no mercy as she splintered trees, houses, businesses, entire downtown communities, and boats – into match sticks.

The night of terror resulted in the inundation of fashionable beachfront homes, hotels, lounges, restaurants, and souvenir shops. Ports and marinas were left in shambles memorialized by huge steamers having broken from their moorings and had been crushed on shore in tangled metal sheets and beams of steel.

Daylight brought relief and concern – abating the fears of the night. There was relief that the storm had finally passed and that many friends and relatives had survived. Concern was then turned to inventory the destruction and full extent of damages – and the searching for and counting of the dead.

The sum total of statistics was

that Camille's wrath had killed 131 Coast residents and an untold number left missing, while several other thousands sustained injuries. Nearly 7,000 homes were destroyed and almost 50,000 suffered some damage. Approximately, 750 businesses were destroyed or badly damaged and dozens of churches were annihilated. It was concluded that no populated area in the entire United States had ever been struck by a storm with the intensity of Camille. Extensive property damage totaled in excess of $1 billion. Tornadoes, 80 in all, followed Camille's northward trek while slashing through inland pine forests. Mississippi's tung oil industry was all but destroyed.

Camille was so brutal and devastating, that the Climatic Control Agency removed her name from future Hurricane Listings – much like they remove the jersey numbers of sports personalities.

Camille was so severe, that upon leaving the Gulf Coast it plowed northward through Mississippi, through Tennessee and than eastward into the Atlantic, but not before killing 106 more persons in Virginia and West Virginia.

The Gulf Coast was left in a shambles from the awesome and devastating blow dealt by Camille! Mile after mile of beachfront showed nothing but wreckage and destruction. The task of digging out was assumed immediately that Monday morning. The military began to bulldoze paths through the debris-clogged streets. This included many units from the Navy Seabees at Gulfport, the Keesler Airmen at Biloxi, and National Guardsmen from across the state.

Boards and timbers from homes and commercial buildings littered the area in piles that had to be removed for access and safety.

The beach became a depository of strange and precious items swept out of homes as the waters moved back into place.

It was reported that the beachfront looked as if an unruly giant had been playing jack-straws. Beachfront homes on U.S. Hwy 90 were damaged severely or destroyed and reduced to rubble. The debris along the beach was an incredible collection. Dozens of television sets littered the highway and beach area – having been strewn there from a T.V. repair shop that had been destroyed. The sea wall was cracked in many places. A sports car had been washed upside down onto a front yard of a destroyed residence.

Without the military, the cleanup would have been impossible. Especially helpful were the "Can-do" Seabees of the Naval

Construction Battalion Center in Gulfport and the men and women of Keesler Air Force Base in Biloxi. In the first week alone, 25 tons of dead animals were removed by the military and the Army Corps of Engineers. The months-long cleanup involved millions of tons of debris – crushed cars, downed trees, wrecked houses, churches, businesses, piers. All the refuge was plowed under at 27 disposal sites.

Long Beach Shopping Center

As soon as Camille's winds stopped, citizens of the three coastal counties of Hancock, Harrison, and Jackson began digging out – looking for signs of survival – More than 40,000 homes and businesses were destroyed or badly damaged.

Thousands of people were injured and at least 131 had died.

Gulfport Debris

In an early report, Memorial Hospital officials had estimated that 50 persons either came on their own, or were brought to the hospital during the night. A hospital spokesman stated that, "A dozen or so have been admitted." There were some fatalities, but the hospital official said information could not be released immediately. National Guardsmen were stationed at hospital entrances and only the sick and injured were allowed to enter.

Reporters, editors and photographers went out in those first few weeks after the storm and recorded the Mississippi Coast's rebuilding mentality that *Daily Herald* editor Bob McHugh predicted in an editorial immediately after the storm.

"It is becoming increasingly apparent that the Gulf Coast has suffered one of the most tragic hurricane disasters in history. We mourn our dead. We stand shoulder to shoulder in sorrow with those who have lost their homes and their businesses. We grieve for those who have been injured. We view with deep sympathy communities such as Long Beach and Pass Christian, which exist no longer as we once knew them. We watch with awe as Biloxi, Gulfport, Bay St. Louis, Ocean Springs, and Pascagoula struggle from beneath a sea of mud and debris. Homes, churches, buildings and even highways that

But Despair – We cannot Afford!

were so much a part of our lives are gone. Over all of this we can weep, for our lot today is sorrow. But despair we cannot afford. In downtown Gulfport and Biloxi today, and in every other community on the Coast, men and women are at work with brooms and shovels. Sweat pours from their brows. There is no air conditioning to cool them and little water to quench their thirsts. Still they toil. The monumental task of cleaning up has begun. Maybe it will be months, or even years, before we have fully recovered. Perhaps what we rebuild will not resemble exactly what we once had. But rebuild we will. We will sweat and we will toil until the Gulf Coast is once again the fairest part of our state. And when we have finished with the task, no matter how long it may take, we will be able to say to one another, *We met the challenge*."

We will sweat and we will toil until the Gulf Coast is once again the fairest part of our state.

Digging In - - -

South Central Bell installed outside public telephones at its local offices in Bay St. Louis, Biloxi, Gulfport, Pascagoula, and Moss Point. Calls could be made either collect or could be charged to a person's home phone.

At Gulfport, there was a large bank of telephones that were attached, one next to another, on a wide board that was nailed to a large spreading oak tree. It quickly became referred to as the "Telephone Tree."

Mosquito Control units were sent out to spray the County in order to cut down on possible epidemics. SBA sub-offices began setting up to perform loan processing.

Delivering up the Dead

On the fourth day following the disaster, the American Red Cross made an initial damage assessment as a result of surveys reported by building inspectors. The report showed 4,717 houses destroyed along the Mississippi Gulf Coast and at Plaquemines Parish, Louisiana, which Camille had hit before turning into the Mississippi Coast.

Additional Mississippi losses reflected that 8,493 homes received major damage and 19,132 received minor damages.

Early reports listed at least 10 dead and hundreds injured. More fatalities began to appear as rescue workers cleared away tons of debris. Volunteers continued to step forward for the gruesome job of locating the dead – rummaging through piles of rubble that were rife with snakes and fire ants

Biloxi Beach Front

The Governor released an initial projection count of the dead as being 230 plus. However, the County Coroner at Gulfport had held inquests for only 104 persons from all coastal cities in Harrison County. "These are all the bodies we have;" she said. Without proper storage facilities, the bodies were piling up in Gulfport funeral homes with no way to get them to temporary morgues that were made available at Hattiesburg.

Run Aground in Biloxi

The morning after Camille, one military search-and-rescue team was approached by a woman on the beach who asked if she could keep anything she found. They glared at her in disbelief and went about their gruesome business. A few minutes later, they saw a chest of silverware fly up in the air as the startled pilferer screamed out that a body was floating in the water.

Four FBI fingerprint experts were sent to the Coast, while refrigerated trucks were expected from New Orleans to move the collected bodies.

Ron Elias, reporter for The Daily Herald, made the following commentaries. "The grim figures are beginning to come in. There are far more dead than we had feared. There is more destruction than any of us had imagined possible."

THE DAILY HERALD

Gulf Coast Begins Tremendous Task Of Digging Out From Awesome Blow

This Boat Slammed Into House While Huge Ships Were Tossed Ashore

Camille Punches Northward

Published In S.C.

Death Toll May Hit 200

3 Coastal Counties To Get Federal Aid

Nixon's Guidelines May Set New Mark

The Media

The media was hailed for its help, both before, during and after. WLOX, then both a radio and TV station, was located in Biloxi's beachfront Buena Vista Hotel. The newly acquired color television system went out with the electricity, but radio stayed on until 10:03

p.m., when the storm surge swept in. Manager Ray Butterfield had opted to stay on the air instead of moving his expensive equipment to safer grounds, and his continued pleas to evacuate were credited with saving hundreds of lives.

Miss Camille

By Irma Reinke

— But this hurricane - - - Camille - - - was different . . . All day Sunday, August 17, – long before the rains came, as we heard the latitude/longitude, we knew our golden Mississippi Gulf Coast was the target of Camille's 'Eye'.

When a late night radio station advised that the winds were 160 m.p.h. with gusts of 200 m.p.h. – and the winds of nuclear force – well, the mind cannot comprehend the magnitude of such a force hitting the mainland. But, waiting silently north of Camille on that night of August 17 was our beautiful Mississippi Gulf Coast – a place of heritage, a place of fun and laughter in the sun. For six generation families, to many who had only recently moved into anyone of the coast cities - Ocean Springs, Biloxi, Gulfport, Long Beach, Pass Christian, Henderson Point, Bay St. Louis, Lakeshore and Waveland – this is home . . . and then, CAMILLE hit!

The devastation on the beach along our once Golden Coast was so complete. It looked like an abandoned lumber yard. Churches, homes, restaurants, amusement parks, yacht clubs, our area of the land that we love was completely crippled, beyond belief – beyond description – with heavy casualties. (Why there were not more is incredible, but there were many miraculous escapes.)

But, all of us know that "the spirit of God is within you" – and everywhere the symbol of strength of this spirit is being shown – where American flags, the flag of our United States, can be seen gently flowing in the breeze, in the front of our churches, attached to posts in front of businesses, and on the porches of homes.

The Spirit of Old Glory

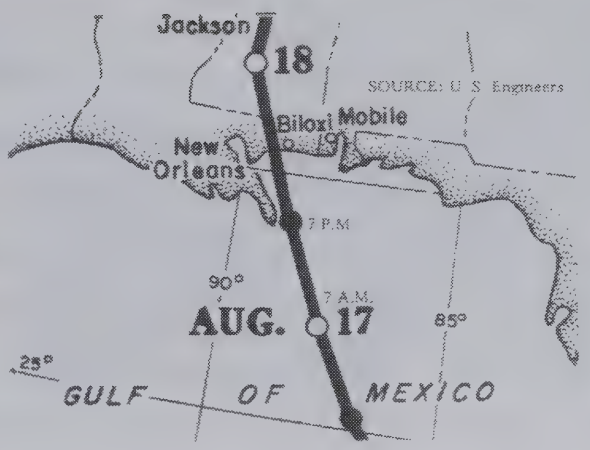
Almost overnight, American flags were being flown atop piles of debris, wrecked homes and shattered businesses. "Old Glory," more than any other symbol, galvanized Camille's victims to rebuild their battered lives. "We gather that Gulf Coast residents are telling the world that they are far from licked," *Daily Herald* editor Robert McHugh observed in the newspaper that missed no editions despite damage to its plants and the personal losses of its staff.

Even thirty years later, Camille continues to be featured in television documentaries, as some of the most poignant scenes remain – those of the Stars & Stripes waving defiantly from twisted flagpoles.

Through it all, day after day, the American flag was on display, always waving, always confirming the courage of it's citizens. Patriotism was fueled by the inspired and spirited citizens to rebuild. This was rewarded by a crescendo of national support and a media blitz. President Richard Nixon visited the coast on September 8, 1969 consoling the populace and declaring Coastal Mississippi as a Federal Disaster Area.

In 1969, the Daily Herald reported on The Rise Again theme which had become commonplace on many homemade signs.

Pass Christian



As on any weekend during the heat of Summer, the Coast was quickly filled by Friday, with the usual crowds of tourists. Weather reports were of little concern or ignored as the sun was shining brightly. Hotels and Motels had not yet turned off their "No Vacancy" signs, in awaiting late arrivals. Late that Friday afternoon, radios began to alert that a tropical storm had converted into Hurricane Camille and was being tracked south of Miami after having cut across Cuba. Early on Saturday morning, the Coastal area from Biloxi to St. Marks, Florida was placed on *"Watch"*. However, in escalating moments, TV stations started advising evacuation of certain areas such as Grand Isle in Louisiana.

About 7 p.m. Saturday night, Police Chief Jerry Peralta was driving to Gulfport to pick up his wife's parents who were arriving from St. Louis. On the way there he had an uncertain feeling due to the quietness of the evening.

Early Sunday, August 17th, the Storm was tracked southeast of New Orleans by more than 200 miles with winds registering 160 miles an hour. A *"Hurricane Warning"* was then announced for the entire Mississippi Coast. Evacuation was advised.

City Civil Defense Coordinator Parnell McKay was assisted by several members of the Volunteer Fire Department. At noon, the city siren alarm system wailed out continuously echoed by the background cadence of church bells that peeled out – each sounding out with its own unique ring – calling out to the citizens to evacuate their homes for designated shelters. Some of the VFD members stayed at the Second Street Command Post ready for any emergency call. Others were out checking the streets and shelters.

At noon, the city siren alarm system wailed out continuously echoed by the background cadence of church bells that peeled out.

At about 5 p.m., Chief of Police Jerry Peralta led his small force of patrolmen throughout the "Pass" assisting in the evacuation process. Patrol cars had been equipped with loud speakers urging citizens to leave their homes to seek shelter at the locally designated Civil Defense shelters. Many of the townsfolk were hurricane resistant in that they had weathered many killer storms before, so they were inclined to persist in holding their ground.

Peralta had personally gone to the Richelieu Apartment complex several times and talked to Mr. and Mrs. Merwin Jones. He recalled that Mr. Jones stood in his doorway, with glasses on and a drink glass in his hand refusing to leave.

Returning to the police station he noted a shrimp boat racing toward shore. "That water was just as calm as it could be, but right behind it, you could see the black clouds coming in," recalled the police chief, who died in 1982.

Flooding between Market and Clark north of Railroad

Once more, at 6 p.m., that Sunday, August 17, 1969, the siren at the Pass Christian Fire Station rang out, deafly sounding out as it proclaimed the Hurricane's imminent approach. As the heavy winds started picking up about 6:30 p.m., transformers started blowing out and telephone service was interrupted. Water started rising rapidly about 9 p.m. and by 10 p.m. it was "real bad" as Peralta and VFD volunteers rode up and down Second Street in an amphibious "duck" vehicle hauling off people who were flooded out and seeking higher ground. They were picked off trees that they had climbed and from attics where they had thought to escape to.

That frightful night, Camille struck with an inestimable fury, just after ten p.m., plowing up the bay channel that divided Bay St. Louis from Henderson Point. The Mississippi Coast, but more so at Pass Christian, was directly in the path of winds clocked at more than 200 mph and tidal surges of up to 25 feet. The storm's fury commanded an unforeseen tidal wave to be mounted in crossing over the beaches, across highway 90, to inundate practically the whole town of Pass Christian..

Sylvester Pagano at Henderson's Point escaped with his family to take nearby refuge beneath the Hwy 90 overpass. They crouched behind the wide cement pillars. He later stated that when his house blew down from the winds, that the Bay waters had been sucked out to the Sound enough that he could see the murky bottom of the basin.

Bay Bridge entering at Henderson Pt.

Those who were venturing out that night described the night as having lost its darkness. The sky was filled with light from a cascade of lightning that lit up the horizon and made everything visible.

A hurtling mass of water then came crashing, with rolling breakers swirling on top. It was so mammoth that many buildings and houses were instantly smashed to pieces. A solid wall of water advanced over the ridge and over Scenic Drive, crashing down the hill past Second Street, and continued on pressing over the railroad tracks – rolling northward toward Bayou Portage.

Then a second rush of water bombarded and covered the Town almost in its entirety. As a further peril, waters were rising out from the bayous and backed up to meet the Gulf tidal waters. This caused extensive street flooding that ranged between 5 to 15-feet-deep, depending on what part of Town it settled in. Automobiles became submerged causing emergency vehicles to be rendered useless. Down the center of the Bay of St. Louis pressed Camille's monstrous 5-mile-wide eye – The Pass was positioned at the eye's right-front quadrant – the worst place to be when hit by such a storm. Those in the Pass, in remembering the storm night, recall no break in the storm winds – as the eye was veering off just west of the town.

Pass Christian Beachfront

As the evening proceeded, the hurtling winds picked up in excess of 200 mph. There were many valiant deeds performed that night by Civil Defense personnel, law enforcement officers, firemen, military personnel and local civilians in safeguarding others that were found in distress. Screams for assistance were answered with daring rescues – while other screams were quieted by the clamoring roar of the winds, not ever to be heard again. Many pleas for help, went unanswered because the would-be saviors could not locate the source of the appeals for help. Some residents were trapped and would not leave their "safe haven" in fear of losing their lives out-of-doors..

Hwy 90 at Magnolia

Many hundreds of "Pass" residents spent the most terrifying night of their lives not knowing just how much longer they could hold on. Many of them had ample time to reflect the wisdom of their decision in staying with their homes, rather than seeking safety elsewhere. Facing the hazards of the evening, resulted in a number of ill-fated accounts which have been retold over and over again. Some exaggerated, some misleading and some that resulted in unwarranted fatalities.

● George Watson, former Educator, was alerted that Sunday at 11:30 a.m. to assume his post at his designated shelter at Pass High Gymnasium. Police squad cars, Fire Trucks, and volunteers went through the neighborhoods urging evacuation to the designated shelters. The people in the low areas were being evacuated first. Watson's daughter, Phyllis, was indoctrinated in the process of registering the slow trickling of stubborn refugees. They had experienced too many past false alarms to anticipate what would happen in the next few hours.

Those who tuned in to hear radio reports were confronted by announcements that were still predicting the hurricane's path towards Louisiana.

At the Gymnasium, concern for its security was raised. The winds increased – blowing out two windows. It was then decided, with the help of some Seabee's, to move the evacuees to the main school building. Picking up their belongings, they were escorted out into the howling winds and rain to gain more secure sheltering. They were warned that the electricity would be turned off around 9 p.m. Water started rising from the floor as nearly 300 evacuees scrambled for the stage or any furniture that would provide higher ground. The water level had climbed to 14 inches and remained so for most of the night. Increasing winds began to hurtle debris upon the structure as everyone uttered prayers for protection.

Market St. at Scenic Dr.

As the morning sun began to give light, small groups forayed outside to confront the devastation of the evening. They realized that their prayers were answered as the wet, sleepless throngs filed out to evidence the demolished Gymnasium, which had been their first shelter.

● At Our Mother of Mercy Church, just south of the railroad tracks off Davis Avenue, Father McLoone of the Josephite Order, accompanied by one of his Negro parishioners, had gone about trying to get his people to leave for the Civil Defense shelter. They came across a white couple who had become exhausted in the struggle with the wind. Father took hold of the man, while his Black helper carried the wife on his shoulders as he trudged to the shelter. Father McLoone then pointed out to the husband's wife atop the Black parishioner, and shouted to the man, "What do you think about integration now?" The husband replied "Father, Black is beautiful!" At that time, Father McLoone was one of the staunch leaders in the desegregation of schools.

Hwy 90 Damages to SeaWall

Father McLoone retold another amazing story of one of his families who had elected to ride out the storm in their house. As the water rose, they climbed to their attic and then had to break through their roof. Finally, they had to swim to a tall tree, and as the water rose, they climbed the tree, tying themselves and their children to the branches. It wasn't until the waters receded, that they were able climb down the tree while it was still dark. The next day, they saw the spot on the tree where they had

stayed through the worst of the storm – it was twenty feet above the ground!

Scenic Drive

● About 10 p.m. the glass windows broke in from the front porch. The water rose higher and higher. Edith Byrd de Vries had gotten out of her wheelchair and was standing inside a closet holding onto a walker because the front doors had been blown open and the rushing water had even floated in the outside porch furniture. The walls cracked, the mirror and pictures fell, and furniture was being pushed about by thrashing waters.

She and her daughter, along with the tenants from the back-house hoisted each other to the attic. As the water rose the Lafiollette men punctured a hole through the roof. Her daughter lost her grip and was thrown into the stampeding water where she survived by clinging to floating debris until rescued the following morning. The Lafiollette's floated aboard a section of roofing throughout the night. The crippled DeVries was blown off the roof and into the water, for what she described as the "wildest ride of my life". Bruised and badly battered, drenched and cold, she was finally rescued by Navy Seabees, but not until two days had passed without food or water. The front steps were all that was left of her home.

● Mary Ann Gerlach has often been reported as the only surviving person from the beachfront Richelieu Apartments on Highway 90. Over the years, it has also been recounted that 23 others stayed to "party the night away". The story was mistakenly reported as such by national news media the day following Camille and continues as a myth in commemoration releases by local and national news media.

Some reports had it that Hurricane Camille promoted an excuse for a Hurricane Party.

Richelieu Apartments After Camille

Second St. at Davis Ave.

According to Gerlach, she and her husband Fritz had stocked up on food and booze for the evening. They had worked late the previous night, so they decided to take a nap before partying with the other apartment tenants. She was awakened by the strong gusts of wind and siding boards being ripped off the complex. Jumping up, she jerked her husband from sleep. She looked up as the walls cracked open and the third floor above her was about to crumble down. Her husband Fritz didn't want to leave because he couldn't swim. The rising waters gushed around her. Instinctively, she grabbed onto a cushion as the waves pushed her out a window. She noted that the waters were also thrashing against the top floor where the other tenants were supposedly having their Hurricane Party. She couldn't distinguish the people, but she could still see the lights, as she was being washed away. Then the lights went under water. The third floor of the hurricane-proof apartment complex tumbled into the murky swirling waters driven by the Gulf tide.

Gerlach swam and clung to pieces of floating debris and furniture. She was exhausted from being in the water from 11 p.m. to 5:30 a.m. the next morning. She was found bleeding, skinned up, and limp as a rag doll atop a mountain of debris. Her husband's body wasn't found until more than a week later – bloated and battered beyond recognition – except for a diamond ring that she had given him for their anticipated second wedding anniversary.

Downtown Pass overlooking Harbor and old City Hall.

● Another of the surviving tenants of the Richelieu was a young, off-duty Seabee. Realizing his dastardly act of remaining to party, he took stock in the danger of remaining in their quarters. As the winds and waters further imperiled their haven, he suggested that the roof of the building would be more secure. Mrs. Zoe Mathews went up with him while her husband refused to go. Observing that the building was about to collapse, the Seabee told Mrs. Mathews to hold onto his waist as he would ply the water to the safety of a nearby floating roof top.

Needless-to-say, halfway to the floating building, Mrs. Mathews became disengaged from her protector by the water's turbulence. However, the Seabee lived to help out with the morning rescue crews.

● Paul Williams, the church sexton, was concerned about the uncertainty of his home, so he called the Pastor for permission to bring his family of 16 to ride out the impending storm. Williams moved his large family to what he thought was the safety of a building that had survived 18 hurricanes. It had been constructed in 1849.

The Devastation of Trinity Church

The water began to flow into the building about 10 p.m., rising upstairs and causing loose items to tumble down. Williams began moving his family up a 12-foot pull-down attic ladder. One by one each family member was raised to the highest level. As Williams attempted to climb the ladder to join his family, the wind and water took control. The boards framing the building cracked open. Williams was swept into the adjacent Live Oak cemetery where he found refuge in the fork of a tree standing against the swirling waters. His family were washed away screaming for help with no one to respond. During the night Williams watched the mounting debris, the toppling tombstones, and the regurgitating coffins popping out from recently dug graves.

The misfortune at Trinity Episcopal Church, actually, was the worst single tragedy to occur in Pass Christian's history, since the loss of 10 Christian Brothers to Yellow Fever in 1867. Camille claimed 13 of the Williams' family. Paul Williams survived along with one son, Malcolm, and his son-in-law, Erin Burton. In an adjoining building, the Pastor's wife was also lost.

The next morning, with the assistance of rescue workers, Williams and the other two family survivors began the grisly task of recovering the bodies of their loved ones. The irony of the incident was that the Williams' house had escaped the storm unharmed.

Barkeley Dr off the Beach

Chief Jerry Peralta remembered watching the recovery of the bodies from Live Oak Cemetery. "The thing that hurt me most . . . was Williams with his family, as I watched him carrying those bodies. He carried them out of the cemetery and laid them on the sidewalk", stated Peralta, during an interview prior to his death in 1982. Williams buried his large family in DeLisle, which included his wife, 10 children, and 2 grandchildren.

Near Henderson Point

- All through the dark night as the storm was raging, LARCs and Marine amtracs fought to save nearly 2,000 lives. At the Pass, a small boy fell from a disintegrating house as Guardsman William Dodson leaned over the side of his LARC to grab the boy but fell into the torrent with the youngster. Holding the boy, Dodson grabbed onto a car bumper and inched his way back to the LARC.

- In another instance, Sergeant Joel Levi removed five persons stranded on a roof, one of whom told of a boy floating on a mattress. Levi swam into the trees and found the boy who explained that his parents had placed him on the mattress as their home blew apart in the Isles, some three miles away.

- On that dreadful night, 84 year old John Dambrink Sr., "feeble minded"; and his wife, Anna, "bed-ridden and wheel-chair bound" with arthritis in her spine, were stubbornly refusing to leave their home. Daughter Elizabeth, known as "Sis," had for years nursed the Dambink's in their old age. Piet Stegenga was a step-son – with his wife Valena – decided to remain with the family together with step-brother John Dambrink, Jr. Piet, Valena, and John Jr. survived. Sis and the old folks died.

The MoonLite Drive-In Theater

Earlier, Piet had told his boss that he was going to have to stay with the Dambrinks. "Them people are crippled. You can't save crippled people in a storm," he remembered saying.

As the hurricane hurled its full strength, Sis, Piet and John Jr. were in the kitchen drinking coffee. The old man had gone to bed. Valena was taking coffee to Mother Dambrink when all of a sudden water started rising from the floor. The water kept coming up and the old man started hollering. Piet and Sis took him outside to raise him up on top of the family car, but in fighting the restraining hands, he slipped from the car roof and was carried off by the raging waters. Then the house caved in. Piet was caught in the rush of water as he grabbed at an thing floating by. He remembered seeing a telephone pole snapped in half just as if it were a match stick. Valena managed to stay afloat by catching on to furniture and passing debris. Amazingly, Piet and Valena were reunited in the flowing waters as they clung together on a piece of plywood until the next morning. They recognized the home of a neighbor where after the harrowing night, they welcomed a stiff drink of whisky and a cigarette. John Jr. was found hanging alive in a pine tree, but the bodies of the elderly deceased were not found until a week later.

East corner Rafferty Bldg. after Camille

Exchange Bldg -formerly Rafferty's

- The Barrett's decided that they would ultimately be more secure in accepting the invitation of their friends, the Chauvin's in their beach-front home on West Beach. The house was completely deluged by the surging tide which killed eight members of the two families. There were nine others who survived the shocking explosion resulting from the raging tide. Fortunately, they had opened windows on the second level, both in the front and the rear of the house. Those houses which remained tightly buckled up exploded in loud bursts – choking out all that was inside.

St. Louis at West End Road

- Others who died that night were the Smith's, the McDonald's, the Barne's, and the Alexander's along with their two children. The Schuyten's were father and son. Their bodies were found tied to the Bayou Portage bridge. The raging water and floating debris had torn much of the skin from their dangling torsos. The only armor of protection they had was their life jackets, which had failed them.

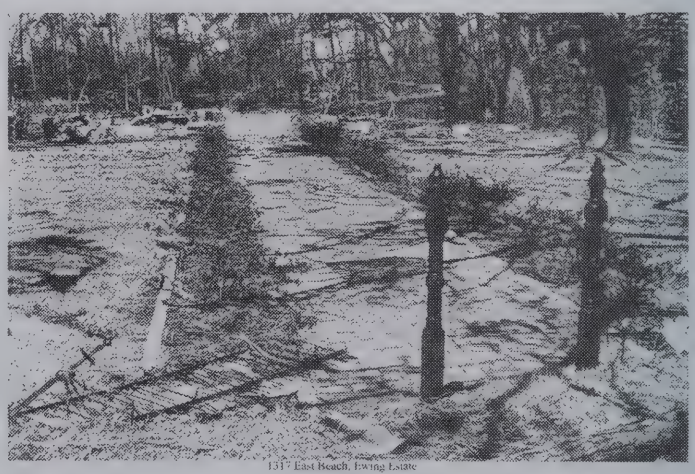
● From Mother of Mercy Catholic Church, alongside the railroad tracks off Davis Avenue, Father Philip McLoone went to a number of his people's homes urging them to leave, but they refused, saying that they had ridden out other storms and they were not afraid. At 10:00 p.m., he forced his housekeeper Miss Myrtle and her sister to leave for St. Paul's auditorium, one of the designated Civil Defense shelter. By the time they arrived, and having evaded fallen trees and live wires, the winds were blowing so hard they had to hold to one another.

The Dixie White House was later torn down

Father left them to seek out more refugees. During the height of the storm, he gave last rites to an old lady, Mrs. Amelia Benoit, who had a heart attack and was dying while at the St. Paul Gymnasium.

The next morning, the housekeeper found a ring of mud four feet high inside their house. Everything was wet or destroyed. At Mother of Mercy Church, the rectory, church and school were practically inundated by the flood waters which rose half way up the altar . The pews were covered with mud and all the statues were soaked and ruined. The baptismal font and the Paschal Candle were found floating outside. The roof of the rectory had blown off. The school and the convent showed the same picture of desolation.

Beside the church along the railroad track a large house had floated across the rails and was left there stranded by the receding waters.



1300 Block of East Beach Boulevard

● The Walter Peat family was lucky, all they lost was their two-story home and their collected treasures from trips throughout the world. When their front doors were knocked open, they scurried to the second floor for protection. While there, one of them placed their silver dinner-ware in a plastic bucket. Shortly afterwards the back wall of the house caved outward and they all jumped aboard to float along with the rushing tide. Two others of the family escaped by hanging onto a mattress. The night was dark and all they could remember seeing was the luminous glow of jelly fish that glistened from the churning waters.

The next morning, rescuers found them wedged 40 feet above the ground stuck between a tree and a house. The one that carried the bucket, found 2 spoons, 3 forks, and one knife as all that remained.

Steps to NoWhere

● The Van Horns decided to stay with their home and even stocked up on groceries and necessary emergency items that were eventually brought up to their attic. "Like all Gulf Coast people, we thought we'd ride it out," said Dreux Van Horn who was a young boy at the time. They were aware by 10 p.m. that Camille was quite a different storm than expected. Peering down the attic drop stairs, Van Horn watched from the attic as the water was quickly rising.

"Then at midnight, there was a terrible crashing sound. The house exploded! It blew up!" he said and the last words to his mother were, "Well, it's been nice knowing you."

Thrown into the swirling menace of water and wreckage with the roaring sound of the 200 mph winds – he was separated from his mother and was pushed by the rushing tides and rolling waves.

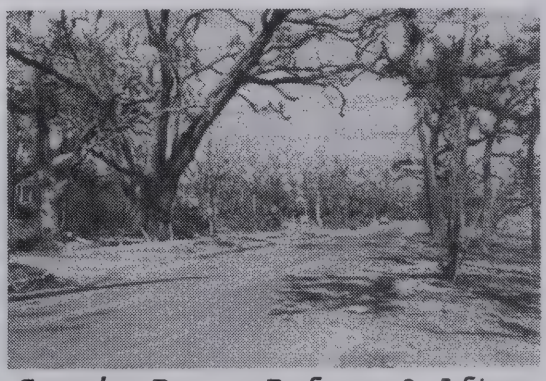
"You have no control at all. You can only push off stuff that's bumping into you. Just fend it off the best you can. You just took what came and survived it as best you could," he exclaimed.

He bobbed along grasping at floating objects and defending himself from passing debris to finally latch on to a tree which he climbed up into its higher limbs. All night long, he dept his grip on the tree, lying on his back, stretched out above the toiling waters, hour after hour until day break when the water started receding.

Van Horn trudged the three miles back to the beach front where his house was totally gone. Happily he found out late that afternoon that his mother was picked up several miles from the beach by an amphibious truck.

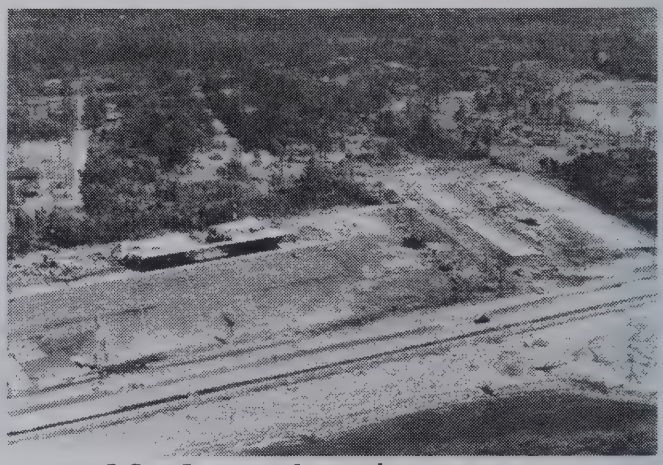
● Another harrowing story was of 19-year-old Ann Hunt and her friend Ruth Duckworth who were vacationing in San Antonio when they heard of the impending storm.

THE OLD ROUTE OF HIGHWAY 90 in east Pass Christian. It is now called Scenic Drive and the section pictured is one of the highest elevations along the beachfront.



Scenic Dr. - Before & After

After packing their belongings, they anxiously drove back to the Coast to reach her parents in D'Iberville. The Interstate 10 highway system was not yet opened, so the trip was long – it wasn't until 8:00 p.m. that they were crawling across the Bay St. Louis bridge confronted by heavy gusting winds and wave action that wrapped around their automobile.



Gulf Plaza Shopping Center next to Penthouse Condos

As they braved Hwy. 90, through Pass Christian, strong surges from waves were crashing against the car wheels. As they reached the old shopping center near Long Beach, a 3-foot tidal wave smashed the side of the car and temporarily stalled it. After frightful minutes the car was started once more. Ann then maneuvered over to the west bound lane furthest from the beach on higher ground. However, the car stalled again and after minutes realized that the battery was dead.

However, a short time later they were fortunately picked up by the Leon Coxes of Pass Christian who had occasioned to leave their home behind the shopping center on Edwards Drive, "just to see the action." The winds whipped up as the Coxes returned to their home accompanied by their tired and harried survivors.

Behind Shell Station on Davis Ave.

Then, Camille in full fury, struck the brick home which resisted the worst of the winds.

The next morning, as the Coxes and their new found friends walked out the house they found that the brick house was the only one left standing in the neighborhood.

Although safe from harm, Ann was worried about her mother at D'Iberville. Having no telephone access, at 19-years of age, she decided to make the trip to her mother's, which resulted in a panoramic tour of the Gulf Coast. After three miles through Long Beach, she was able to get a ride that pursued along west Railroad Street to Gulfport. U.S. highway 90 was impassable to rode traffic.

Ann began hoofing it again, touring past the former well known resort spots along the Beach front. Through the debris, she tramped for six-miles passing the Friendship House formerly at DeBuys Road. Having nothing to quench her thirst from the hot sun, she found an unopened can of soda which she popped the top from and tossed down the hot liquid.

She crossed over the wreckage of the Cabana Beach and later the Sun 'N Sand, both former motels that were filled to capacity with happy tourists just two days before. She later passed Gus Steven's Restaurant at West Biloxi and finally reached the home of her friend, Ruth Duckworth, who stayed with the Coxes in Pass Christian. Neighbors on Father Ryan Street told her that the bridges crossing the Back Bay to D'Iberville were out of commission.

Early the next morning until 5 p.m. that evening, Ann stubbornly attempted to start her friends's automobile. Finally, it fired up and she took the back streets to Handsboro (now part of Gulfport) where she crossed over Bayou Bernard and took the old road through Woolmarket and arrived to a surprised and happy reunion with her mother at 7:30 that night.

The Morning After – at the Pass

As the night drew to a close, the water started receding. People began assisting others in need. Well before daylight more and more people began moving about, almost totally on foot, because vehicles had been under water and would not operate. The streets were blocked with debris and fallen trees. Then came the dawn.

The Morning After

> . . . And all the people gathered themselves as one man into the street that was before the watergate . . .
>
> (Nehemiah: 8:1)

The day following *Camille* was Monday, the 18th of August. Many families were found dazed and in shock. Yards were strewn with debris as those who persevered looked with incredulity at their damaged homes. Others were found standing on fractured sidewalks stirred by untested emotions as they stared with disbelief at their demolished dwellings. From prior storm experiences, they had come to believe their homes were well fortified from rising water.

Scenic Dr.- Old City Hall

There were few buildings left standing whole. Wreckage was scattered in piles that were as much as 25-to-50 feet-wide and 10-to-15 feet-high, which stood as reminders of the high tidal marking for the Second Street area. Of the buildings flanking east and west and to the south of it, only the old City Hall remained – except for one of its stalwart columns having shifted, it was left structurally intact.

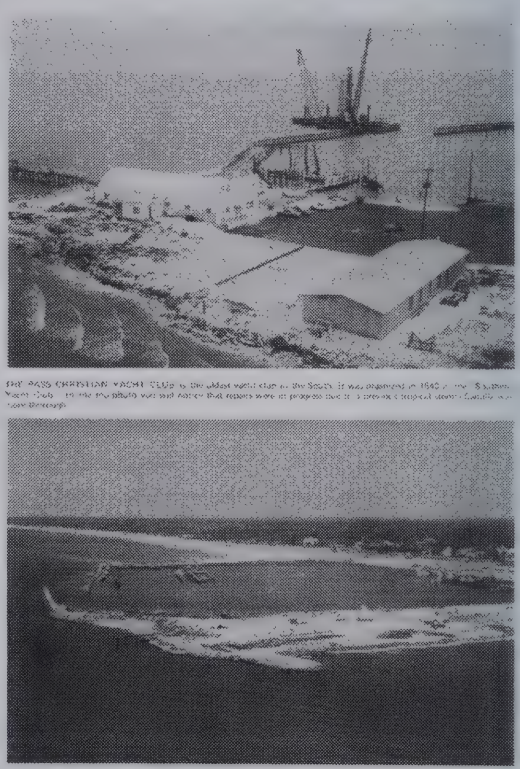
The area from Second Street to the beaches was a picture of complete desolation – as were the low lying areas of western Pass Christian.

Civil Defense Director Parnell McKay was up the whole night. That morning he sees the destruction to Scenic Drive and the Harbor.

Survivors from the previous evening were trying to salvage what they could from their homes. A house had been torn loose from the rising waters and was dropped on top of an automobile. Some reported to each other that the water had risen less than a foot from the peak of their roof tops.

Individuals reported how the storm had picked up some houses and lifted them over fences and deposited them yards away, yet leaving the picket fences that surrounded the former house sites untouched. Streets were clogged with tumbled homes, automobiles and furniture prohibiting automobile traffic. Friends and relatives who arrived from inland towns found that most streets were impassable. They were able to get some idea of the force of the wind and the height of the water. It seemed impossible that anyone could have lived through such tremendous destruction.

All along the front towards the Gulf, the hurricane's full force had wreaked havoc. Stately mansions were gutted and many were mere shells that later had to be torn down. Everywhere – the ground was littered with trees that had been ripped out with their roots. The growl of power saws cutting into branches and lumber sounded above the rumble of dump trucks that began hauling away the wreckage in clearing a path along Hwy. 90.



PC Yacht Club - Before & After

Wambsgan's Bakery was ravished. Its Davis off Second Street location was famous to the after-church crowd that dropped in after Mass or other church services to pick up hot pan bread or jelly doughnuts. The little frame building that housed the bakery was well battered.

The Pass Christian Yacht Club was gone – only a huge hole was left – wrapped by the reinforced concrete wall.

• "Gone With the Wind" was scheduled to play that week, at Pass Christian's beachfront Moon-lite Drive-In The theater and its copy of "Gone with the Wind" were swept away, as was much of the waterfront of Pass Christian.

Henderson Point

• At Henderson Point, the famous restaurant diners: Annie's, Benny French's, Gus Steven's and the Beachcomber, were obliterated. Someone was heard to say, "It's all gone now – Camille's sledge-hammering wind hit hardest here!" The L&N Railroad bridge crossing the Bay was stripped of its tracks as a stampeding wall of water hit it broadside and that was followed by crushing wave action throughout the night and early morning.

The Pass population of approximately 3600, had, for the most part remained in their homes or sought last minute shelter at the Pass High School and the St Paul School. With the exception of those who had homes in New Orleans, only about 10 to 20 % had actually taken refuge out of the City. The last minute evacuation orders were received in confusion as television broadcasters were announcing Camille's presence in Louisiana's lower river parishes. Most of them didn't even take refuge at the locally designated Civil Defense shelters – which for the most part, many of the residents felt as much protection within their own homes. Families and relatives teamed up under one roof where they felt it more propitious.

The fire station in Pass Christian did not appear structurally damaged – Civil Defense operations were set up in the station located a block off the beach. Bodies located among debris during the day were brought in and tagged there.

Pass Christian Isles

With the calamitous destruction of the Pass, State Governor William Winter ordered the evacuation of the homeless and all non-essential residents in Pass Christian. Many were elderly and exhausted from the weekend of terror.

Those survivors who were too old to work and those who would not pitch-in to work, were sent off to Camp Shelby near Hattiesburg, or housed at U.S.M. dormitories . Only the strong of body and mind and spirit remained to share in the long dreary task confronting them. It was estimated that only 500 to 1000 sturdy residents were allowed to remain in the Town during its immediate recovery.

The Recovery

On a New Day!

The South Mississippi area that suffered most was Pass Christian. Every structure in the "Pass" was damaged by the storm. Pass Christian's Scenic Drive was anything but scenic. Rubble from houses and the harbor, along with cars, made the once-scenic drive impassable. Never before had a storm so totally and indisputably devastated such a large area. With an estimated population of 3,600 in Pass Christian, barely a home was left untouched. There were no longer any beachfront landmarks on Hwy. 90 with the exception of an occasional shelled structure or leaning steel beam with a portion of the sign it once held erect. Debris of all kinds, including wood, steel, rest room facilities, washers, dryers, air conditioners and other materials were scattered over the entire area. In some areas the debris was stacked up 30 feet high against the rising land from the beach front. Miles and miles of twisted and felled trees were found everywhere. About all that was left along the beachfront to Bayou Portage was the courage of the people whose homes and businesses were destroyed.

Taking a well needed break!

Initial recovery started with the survivors trying to do for themselves. They attempted to clear pathways through the major streets. An early morning ride from Gulfport to Pass Christian took more than three hours. At the west end of Pass Christian families were found outside their residences with mud almost a foot thick flowing off porches and out doorways. Many families recovered brooms, mops and stray pieces of lumber to scrape out the debris. Mattresses, bedding and other items were being hung across downed trees for airing and drying.

The end of the first day impacted more than physical exhaustion. Emotional trauma began to influence their behavior. There was no electricity, no water, no telephones, no newspaper deliveries, and thus, no way to communicate with the rest of the world.

The first Rescue Teams consisted of local citizens and the small local police force and the Volunteer Fire Department joining with the few members of the City's Civil Defense. However, they were soon joined by Seabees and the Mississippi National Guard. Needless to say, lines of

command and authority became a problem in reclaiming and identifying the recovery of deceased bodies.

The first bodies found were hauled to the Fire Station, then located at Second Street (which later housed the Senior Citizen's Activity Center). As more and more bodies were discovered, they were then moved to the old City Hall, then located at Market Street and Scenic Drive. As time passed on and the heat settled in, the bodies presented a health and odor problem.

The first bodies found were taken to Old City Hall

Bodies, many of children who could not hang onto trees after their homes were leveled by winds in excess of 200 mph, were still being found days after the brutal storm..

Body identification was slow, notification to next of kin was even more difficult and the list of missing and unaccounted for persons was growing longer. The only cold storage facility available was the Ice House, which was impressed into being a temporary morgue while identification and burials were being prepared. During the clean-up in the first few weeks, bodies continued to be found in different parts of town. The stench of death was everywhere in Pass Christian. As more bodies were found, they were eventually transported to Gulfport Funeral Home facilities. Early identification became hindered by the fact that so many local residents had been evacuated. Another problem occurred involving bodies that were mistaken for hurricane victims. It turned out that there were some remains from recently buried that had been washed up from the local Pass Christian cemeteries.

The continued search for bodies was aided by 15 Ft. Benning, Georgia, soldiers who brought in specially trained German Shepherd scout dogs for search and rescue duty in Vietnam. At that time, there was no way to know how many bodies were buried beneath the rubble, so it was felt that the dogs were necessary. This was the first time such an effort was tried in a public calamity.

Market St. where the old City Hall was located.

The dogs and men were taken to a spot where a body had been found the previous day. After giving the dogs the scent, the teams spread out over the area around Pass Christian.

Also, aiding in identification were 4 FBI special fingerprint experts were brought in.

Eventually, seventy-five local residents were identified as killed either during the storm or who had succumbed to injuries received during Camille. Additionally, their were three female bodies that were found near the beach area of Pass Christian whom were named *"Faith, Hope, and Charity"* by Director Wade Guice of the County Civil Defense. The killer storm took the lives of more people from the "Pass" than any other coastal community..

Major relief from outside Pass Christian didn't come about until weeks later. This did not slow the survivors from tackling the immense clean-up task that confronted them. Pass Christian resident Jackson Balch, manager of the Mississippi Test Facility – and the Gulfport Seabee Center – were given credit for their quick response and early intervention to assist the City. Estimates of "some damages sustained" was allotted to 100% of the local homes and businesses, with 90% having "heavy damages," and 25% were designated as "Total Loss." The Mayor, J.J. Whitmann, was overheard to say, "I am mayor of a City, but in name only"

Major Relief started slowly.

A spirited comraderie evolved amongst the townsfolk. American flags appeared as they were found and raised in a demonstration of patriotism for the supreme survivalist feeling that they each began to share. The energy of the townsfolk continued to be in top spirits and upon meeting each other, they would often have an interesting story to pass on.

● One such story had to do with the safe from Trinity Church. It had been picked up by two of the City Police and hauled over to City Hall. When the National Guard took military charge of the City, they dismissed the policeman guarding the box and replaced him with their own 24 hour security guard. The County Sheriff's department later took charge and had two men raise the metal safe onto a truck. It fell to the ground, turning over revealing that there was no bottom to it. The safe had been empty all the time.

Destruction fronting old Avalon Theater.

● In clearing a landing area for Helicopters on the Beach at Davis Avenue, a large cache of fire arms still wrapped in canvass with protective cosmoline oil was excavated. It was assumed that the automatic rifles were buried by smugglers in anticipation of making a run to some southern country for a drug exchange.

Helicopters were used to evacuate Storm Survivors

● Another story that prevailed was a joke in referring to one person's home as the *"Ninth wonder of the World"*. The residence was surrounded with wooden scaffolding in preparation for painting sometime in the 50's. The house-painting never did get completed. However, not a single board of scaffolding fell during the storm. The scaffolded Wonder prevailed for 30 years.

● William Neff of Diamondhead wrote to the Sun Herald newspaper after 30 years had passed. Kat Bergeron reported that Neff was living in New Orleans at the time the storm hit, and as soon as the winds subsided, he flew in a two-seater Cessna to see how his mother's house in Pass Christian had fared. Luckily, she was visiting relatives. Neff did five sweeps of the unrecognizable town - "like viewing the aftermath of an atomic bomb" - to find the house, which had survived despite the sea of water and sand that swept through it. Several days later, he drove hours through the back roads to reach the Pass and check out the house firsthand. An elderly neighbor had drowned, he learned. Neff found his mother's furniture piled up in a yard three doors down. "I found Mother's china cabinet lying on its back on the top of the pile," he said. "I opened the lower cabinet doors and there was all of Mother's fine china. Not one item had been broken. "We found a bottle of bourbon Camille had missed. We opened it and had a couple of stiff drinks. Then the reality of it all set in, and we all three sat down and cried."

Eighth Wonder of the World keeps its scaffolding

Communal Utopia

During that period, there were two weeks of a "Communal Utopia", in which all of the citizenry who worked in the big clean-up became close comrades. Black, White, rich, poor ate together consuming the same food prepared at Pass High School. All of them used the same plates and utensils. They all bathed in the same wells together. They learned to laugh together as they encountered "steps to nowhere" and bath tubs that hung overhead in mid-air. Unfortunately, this utopian illusion ceased to be genuine once the relief money started rolling in.

Xavier Hall was damaged resulting in it later being torn down and 2 lots created.

As Red Cross and SBA loans became available, and organized disaster support phased in, the harmonious assembly became separate individuals once more in caring for their own properties and their own problems.

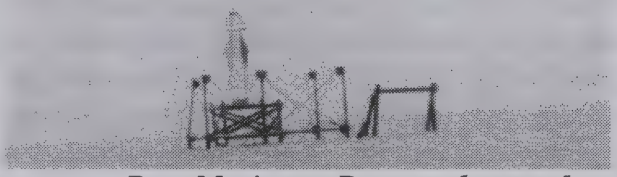
Disaster recovery required support of the National Emergency Relief functions and an inordinate demand for money. Once the dead were counted and buried, street paths opened to permit traffic, power restored, telephone systems put into effect, water facilities provided, health measures supplied, safety programs installed, then; money was needed to procure services in revamping the City and the Coast infrastructure.

Many of the nation's leading corporations including thousands of individual donors sent in money and aid. The Salvation Army, the American Red Cross, the Mennonite Disaster service, and other relief agencies sent in dollars, food, supplies, services, and established provisions for loans and insurance appraisals. $1.3 million came from the "We Care" telethon organized in the capital city of Jackson. Bob Hope led the list of supporting entertainers to raise a bundle of money. Hope was the Master of Ceremonies for the Camille Telethon Charity held in the state capital. Some other participants were Pete Fountain, the New Orleans Saints team, singer Eddie Arnold, and many more.

There were severe damages downtown also.

The "We-Care Money" check, a portion of the money raised by the Bob Hope Telethon was evaluated long and hard by the City fathers. At first, there was consideration to split the City's share between all the residents, but it was finally decided to construct the present day Pass Christian Library Building with the proceeds.

There was so much money that poured into Pass Christian that euphoria had settled in on the Mayor and Aldermen. The Federal Government sent a check for $800,000 which was actually declined and sent back because of concern that there were "strings attached". On another occasion $85,000 was refused, following the same mentality.



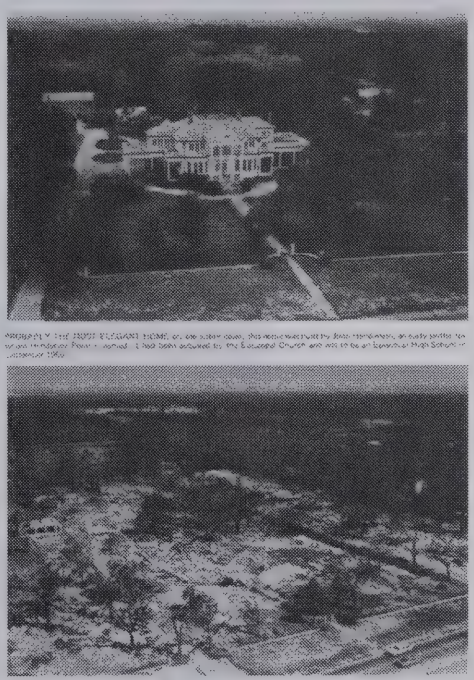
Pass Marianne Beacon shattered.

However, service support groups were always welcomed by the local citizenry. The Mennonite Disaster Support had sent in many volunteers. The Seabees cleaned up for more than a year afterwards.

At Mother of Mercy Catholic Church, a private group, the "Committee of Concern" were on hand to pass out several checks for the amount of money collected in response to their appeals. The money was used for charity, and to buy materials needed to repair the church. Members of neighboring Josephite Parishes were also on hand to hang new roofs and make habitable, three private homes that could be salvaged.

It was an example of Christian charity in action to see them busy working in the parish, as one of the priests announced, "Our men will stay on the job, but in the name of God, they will be able to extend the-help needed now!"

Many mistakes were made. As example, some buildings should have immediately been demolished because of their state of damage to structural walls or to foundations. Needless to say, some were repaired repeatedly for years afterwards. In other instances, one repair group would start one effort, another would come behind and change the first repair job by incomplete reconstruction and yet another would follow afterward to only repeat the quandary once more. It has been recounted that a number of these buildings, even after restoration, should have been condemned from the beginning. As a result, some homes and buildings located within the Historic District that stretches along the beachfront have undergone very expensive repairs in meeting requirements of the Historic Preservation Commission of Pass Christian.



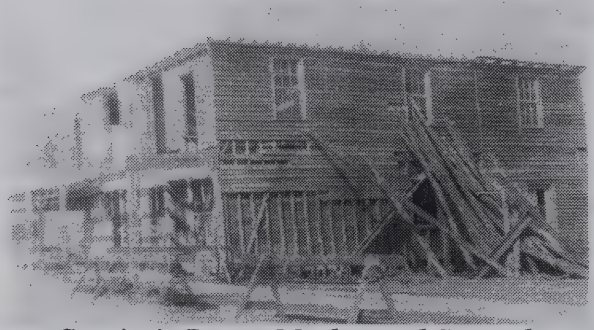
Grand Old Mansion Demolished.

The National Scene

Five Hundred citizens of Pass Christian, Pineville, and DeLisle were called to Pass High for a meeting which was covered by NBC's Huntley-Brinkley News Show. But, the meeting conducted by Mayor J.J. Wittmann had to end early so that the audience could get back to get their daily ration of fresh water.

Dr. C.D. Taylor, member of the Pass Christian Housing Authority announced that those who were homeless and had applied for a house trailer, should clear their site and mark the spot with their name and address in the event they weren't on hand for the delivery.

The Texaco Station used to be west of Market Street



Sperier's Bar at Market and Second was later condemned.

On Scenic Drive west of Davis Avenue

This photo of the Flag flying in Pass Christian became famous.

When faced with the enormous reconstruction costs to repair the main infrastructure of some homes – many persons gave up – never to return. Others took their insurance checks, folded their tents, and left the area forever. While others moved further inland where they are now distanced from seeing the beautiful Mississippi Sound.

The "Union Headquarters" lost its roof, but today it stands as a symbol of heritage renovations.

The City slowly rebounded from the blow Hurricane Camille struck in 1969. More and more Developers and individuals have succumbed to the charms of Pass Christian. Population in the City grew by almost 11% between 1980 and 1990, and even greater statistical reporting is expected for the year end of 2000.. Development constraints have been established within the City which are based in part upon the need to protect residents from another storm like Camille and to lower burdensome insurance rates.

The Richelieu Apartments near downtown, is now the site of a large Shopping Center. — And the Penthouse Apartments on the east end of town have been completely rebuilt and continues in high demand.

The fine old St. Paul Church stood the winds and waters and was not damaged enough to be replaced — but it was.

New Orleans Evacuees Remember After 30 Years

The Penthouse Condominium Apartments were a second home retreat for a number of New Orleanians who wanted to get away from the hustle of the Big Easy on weekends and summer months.

The weekend that Camille hit the coast found the Ken Wards of New Orleans enjoying their fashionable apartment. After hearing repeated warnings from various civil authorities on television, the Wards left for their Carrollton section home in New Orleans. Two days later, Ken Ward returned to get a damage assessment. Before he left New Orleans his wife searched their home for the key to their condominium but it had been mislaid in the confusion of returning the past Sunday. He told his wife forget about it, I'll borrow a key from the manager. It turned out that he didn't need a key.

Ward remembers how he felt when he saw the complex. At first all he could see were pipes that were once attached to the plumbing fixtures. Flying high from a tree were the draperies that once covered his windows. He recalled that all the apartment residents had left the complex but one man who lived there permanently. His death was the only fatality in the 2-year-old, 73-unit apartment complex.

Many of the units had been rented or owned by Orleanians, including the Duplantiers. Adrian and Sally with their six children and young guests packed into their crowded station wagon and high-tailed it for New Orleans. They had run their traps and netted four dozen crabs the previous day. They had room in the car for one of their color television sets or the crabs. They opted for the crabs.

When Sally Duplantier returned to the condo, all that was left standing was a vacuum cleaner and the flat slab of her family's former vacation apartment.

The Duplantiers found only their Vacuum cleaner!

The Pass Memorial

It was estimated that 1000 to 1200 citizens of the "Pass" had refused to evacuate, others who remained claim that half the population of 3600 remained. Of these: 78 comprised of newcomers of only a month residence, along with old-timers, succumbed to the wrath of Camille. Some of the bodies of the deceased have never been found. An elaborate stone, etched with the names of the fatalities, was placed in War Memorial Park on September 15, 1993.

Mrs. Inez Bourdin, wife of Billy Bourdin, had initiated the idea for a commemoration which would signal each of the deceased casualties of Camille at Pass Christian. She began the arduous task of reviewing the names of the victims shortly before she had taken ill and passed away. In years to follow, Billy Bourdin then assumed the completion of the research she had started.

Billy's office on Davis Street has almost become a Shrine in itself. The walls or adorned with dated photographs and pictures of "Before and After" Camille. Stored at his place, or also copies of former Pass newspapers, which are now out of business, such as the "Tarpon Beacon" and even the "Owl." These too have found their way into Billy's Back Room Historical Collection.

In his front office he keeps a voluminous ***Camille*** folding album of newspaper clippings and many photographs, which through the years, he has collected. Many visitors to his shop have also sent him news clippings from all over the country.

In addition, he has the original Red Cross files from Camille and even the authentic Log Book from the Liberian freighter which was shoved ashore in Gulfport. There were so many varying accounts of recorded dead that verification and authenticity was most tedious. It required cross referencing the Red Cross files with listings from the discontinued "Tarpon Beacon".

In assembling the *List of Camille Deaths*, the proper spelling of names became a greater trial, since all court records had been destroyed. Corroboration could have been made easier had the automobile tags been removed by authorities prior to having all abandoned cars declared derelicts and hauled off to unaccountable junk yards. Additionally, all of the significant city officials, such as the City Civil Defense Director, the Mayor, the Chief of Police, the Fire Chief, and the Red Cross Director, had all passed away, at the time of final research. Billy even had to seek out grave stones in various cemeteries in his quest to seek proper substantiation.

Other major difficulties were that a significant number of the deceased were "newcomers" to the "Pass" and had not been known by the "old-timers". The "Richelieu" had its own set of unknown tenants comprised mainly of transient professionals from the NASA complex. The local people regarded the Richelieu as a playhouse for singles and young married's. There was really less reason for them to stay through the Storm since they were not property owners. For that reason most had left excepting a few hardy who wanted to Party.

The *"Richelieu"* had its own set of unknown tenants comprised mainly of transient professionals from the NASA complex. The local people regarded the Richelieu as a playhouse for singles and young married's.

Regardless, there were more survivors than reported, and the dead accounted for eight rather than the continued reporting of 23 deaths by local and national media.

The local chapter of the Veterans of Foreign Wars, in the mean time had taken up the challenge of collecting individual donations from residents in the "Pass". Everyone realized that too much time had passed without offering a remembrance to those unfortunate residents and transients who lost their lives in the biggest Killer Storm ever. The collection effort was short of the required funding for the elaborate memorial decided upon. Therefore, County Supervisor David LaRosa came to the aid of the cause and funded the balance.

It was the wishes of Mrs. Inez Bourdin, that the memorial be established as a commemoration in observance of friends and strangers who attempted to pass the night but who died in anguish. These deceased ones left family, friends and neighbors, she had hoped that their descendants and visitors to this monument would always be reminded that death can happen to anyone, even within the twinkling of an eye.

There were continuing problems that have confronted some of the grief stricken survivors. Many still refuse to discuss that night. One young man had even committed suicide. The reported sole survivor of the "Richelieu," Mrs. Gerlach, years later, was imprisoned for shooting her 11th husband, in 1981. As a contributing factor in that killing, she complained that she had sustained emotional trauma and physical pain that became part of her life since Camille.

On August 17, 1994, the twenty-fifth anniversary of Camille, the commemorating Speakers gave eulogy to the Camille dead, but reminded the people of Mississippi that never again should such a large number of lives be lost. Because of the great loss of life in Pass Christian, the State Legislature passed statutes making forced evacuation a law – also new building code constraint laws were passed.

Because of the great loss of life in Pass Christian, following Camille, the State Legislature passed statutes making forced evacuation a law – also new building code constraint laws were passed.

On the average, the Mississippi Gulf Coast is struck by hurricane-force winds every nine years. These statistics have been derived from the time of the first recorded storm in 1717. These factors do not stop the population growth on the Coast, nor does it cause the long time residents to leave. The people of the Coast have a great affinity for their habitat, even more so, at Pass Christian.

The Hurricane Pole

Little known to newcomers and even many long time residents, is the 28-foot pole, above MSL, at the west-side southern end of the Municipal Harbor. The post registers 4 hurricane flood tides. Atop the post is a weather measuring device from which WLOX receives its weather reporting data. Through the years the post has become heavily rusted and obscures the names of the hurricanes, but steel bands remain to show the tidal surge heights. Camille was marked at 25 feet.

WLOX-TV Weather Pole
Pass Harbor Marina

Thirty Year Anniversary Memorial at the Pass

On Tuesday, August 17, 1999 at 11:00 a.m., more than 100 people gathered at the Municipal Pier at westside harbor in Pass Christian.

Billy McDonald, Mayor of Pass Christian, led ceremonies in commemoration for those who died as a result of the devastation caused by the Killer Storm of 1969.

The special observance was made as a floral wreath was cast upon the calm waters in remembrance of the deceased. Public officials, guests, the general public, and a cadre of news media were took part to observe the ceremonies.

Mayor Billy McDonald cast a Memorial Wreath upon the waters in remembrance of the 78 victims

"Thirty years ago, shortly after 10 p.m., on August 17, 1969, the eye of Camille drove fiercely upon the Bay of St. Louis, thrusting its fury with winds greater than 200-mph and tidal surges up to 25 feet. The unbridled action ravished the land, the homes, the buildings and left 78 dead in Pass Christian. At the time, former mayor J.J. Whitmann was overheard to say, *I am mayor of a city, but in name only!*"

Thirty years later, Mayor Billy McDonald cast the wreath onto the waters as the Seabee's Honor Guard stepped slowly forward in cadence flying Old Glory.

The Mayor led the way to the War Memorial Park where the VFW held another special response at the Camille Memorial Monument which had been dedicated there in 1993, with a listing of each of the 78 Camille victims of Pass Christian.

"Taps" was played and the VFW color guard presented the flag as Father Bartholomew Endslow of Mother of Mercy Catholic Church recited several Gospel selections from the Bible, both for the Living and the Dead.

Navy veteran Roy Stewart of Long Beach was among those attending the Annual Remembrance Memorial Service at Pass Christian Memorial Park.

The 78 names were read off in alphabetical order by Pass officials who had braved the storm and lost family members who had also stayed the night of the Storm. First George Watson, then Chipper McDermott, then Lawrence Williams, and then Mayor Billy McDonald.

Billy McDonald said that people tend to remember the dates of life's tragedies. "One of those days that will always linger in our minds will be August 17, 1969," he uttered as his quivering voice choked back tears, "when the most powerful hurricane ever to touch the mainland devastated the City of Pass Christian and claimed 78 lives here."

CAMILLE

DEDICATED TO THOSE WHO
LOST THEIR LIVES TO
HURRICANE CAMILLE

AUGUST 17, 1969

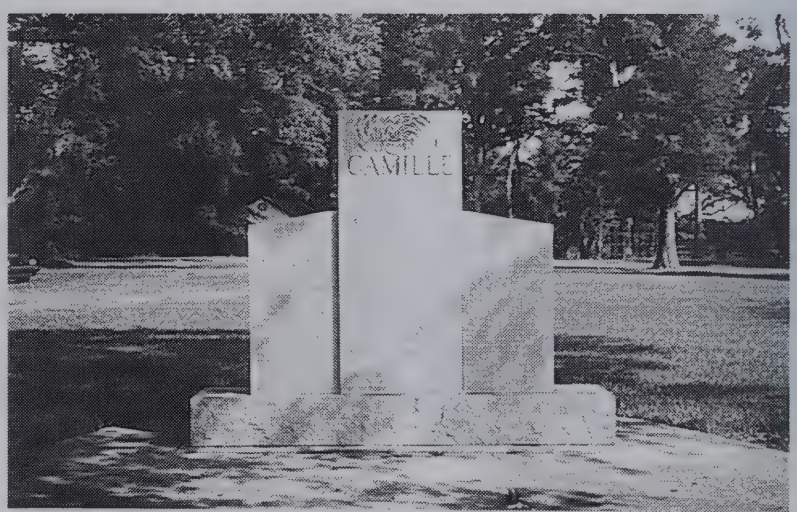
ALEXANDER, GRANVILLE JACK
ALEXANDER, GRANVILLE, JR.
ALEXANDER, HUEY
ALEXANDER, Mrs MARY
BAGG, Mrs A.C. "Fanny"
BARKER, HANNAH L.
BARNES, LEONARD
BARNES, Mrs LEONARD
BARRETT, Mrs ARDEN
BARRETT, CHARLOTTE
BARRETT, VICTORIA "VICKEY"
BELLEHUMER, JANET
BENOIT, AMELIA
BISHOP, ELIZABETH
BLOODWORTH, WILLIAM H.
BOYER, MERLIN
BURTON, WILLIAM
CARMICHAEL, TOM
CHAUVIN, CHRISTIAN MARIE
CHAUVIN, DIEDRA
CHAUVIN, JAMES
CHAUVIN, KATHLEEN "KATHY"
CHAUVIN, Mrs THERESA S.
CHAUVIN, Mrs WANDA
CORNELL, CYNTHIA LOUISE
COVINGTON, WILLIAM HOWARD
DAMBRINK, Mrs ANNA
DAMBRINK, ELIZABETH Stegenga
DAMBRINK, JOHN, Sr.
DANIELS, ALINE
DEMETZ, Mrs BONNIE
DYKES, ARTHUR
EVERETT, Mrs JULIA McDONALD
GERLACH, FREDRICK E.
GESHKE, SHIRLEY ANN
GREEN, ANDREW H.
HALL, Mrs JERRY
HARDIN, Mrs HELEN
HOLLINS, MARGARET
JONES, DOUGLAS
JONES, Mrs HELEN C.
JONES, MERWIN
KELLER, LUANE MARIE
LUNDBERG, Mrs ALLEN "ELLEN"
LUTTGE, ANNABELLE M.
LUTTGE, Mrs WILLIAM R.
MATTHEWS, JACK

THREE UNIDENTIFIED BODIES
"HOPE"
"FAITH
"CHARITY"
ONE OF THESE BODIES FOUND
IN OR NEAR CITY HALL

IN MEMORY OF: INEZ BOURDIN

MATTHEWS, ZOE
McBRYDE, OLIVE A.
McDONALD, HUGH
McDONALD, Mrs HUGH
MOFFETT, ROY
NORMAN, WILLIE JAMES
SCHUYTEN, ANDREW HARTWIG, JR
SCHUYTEN, ANDREW HARTWIG, SR
SMITH, GEORGE JR
SMITH, HELEN
SMITH Mrs MARY "MARIE"
SMITH, MARY LOUISE
SMITH, ROSE
STALLWORTH, WILLIE "One-Eye"
WAGNER, ALVIN C.
WILLIAMS, ANNA
WILLIAMS, BRIDGETT "Burton"
WILLIAMS, CHARLES
WILLIAMS, CLARA MAY
WILLIAMS, DEBORAH
WILLIAMS, EDDIE KEITH
WILLIAMS, ESTHER
WILLIAMS, FLOYD
WILLIAMS, JEREMIAH
WILLIAMS, MYRTLE M. "1921", Mrs
WILLIAMS, MYRTLE M. "1947"
WILLIAMS, SYLVESTER
WILLIAMS, OTIS

This Camille Memorial monument was placed in the War Memorial Park in the City of Pass Christian on November 25, 1993 by the Veterans of Foreign Wars - Post #5931 as inspired by the initiation of Mrs. Inez Bourdin.



In the Tranquility of War Memorial Park – Pass Christian

After more than 20 years had passed, it took a grinding two-year period for Billy Bourdin to track down the names of the deceased using lists from the American Red Cross, obituaries, scouring the cemeteries, rereading old newspaper accounts, interviewing families, and calling upon various agencies and authorities until he was satisfied that an exerted effort had been made in compiling the list of the dead. However, even now, as the years pass by, Billy Bourdin admits that "that which is etched in stone is still not 100% correct." There are some misspellings that he would like to correct.

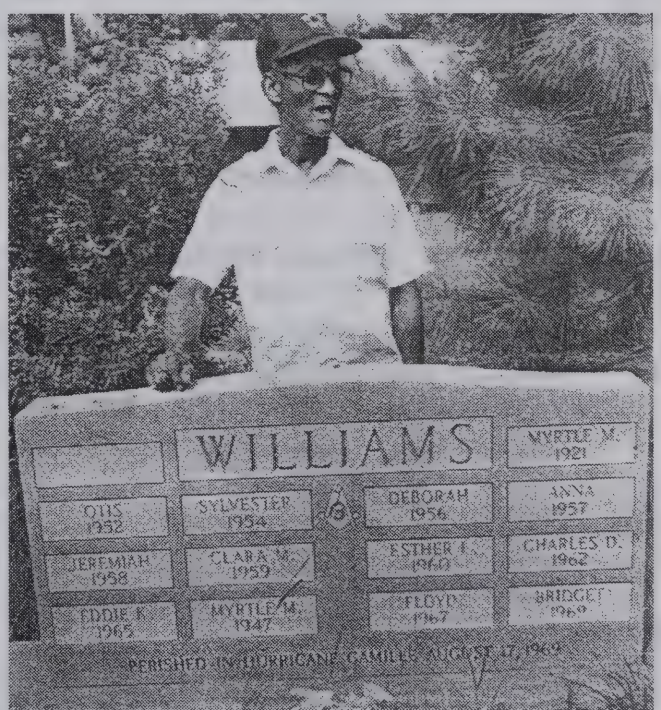
But the effort of Billy Bourdin, his deceased wife, Inez, the members of the VFW, David LaRosa, and all the contributing citizens of Pass Christian – have a memorial monument to remind them that yet another Camille-like storm could cross its shores. As Wade Guice said under his breath at that Memorial Dedication, "It should be a Monument to Fools, for they should have sought shelter!"

> *And Jesus said, "I am the one who raises the dead and gives them life again. Anyone who believes in me, even though he died like anyone else, shall live again. He is given eternal life for believing in me and shall never perish."*
>
> *John 11:25,26*

Former Chief of Police Jerry Peralta had often stated that, "more people died after Camille because of broken hearts and worries than were actually killed in Camille . . . I mean, you take somebody in their 60s or 70s, and wipe them out completely – they don't have anything – I mean that's heartbreaking."

But to many survivors it is also heart breaking as is the case of two of the surviving Williams boys. Malcolm Williams, then an 18-year-old when his father took the large Williams family of 16 members, to Trinity Episcopal Church, a building which had survived 18 hurricanes since 1848. Williams has never forgotten that day and observes it at church every year. He has never felt anger toward God. In his words, "God is the one who gives life; He doesn't take life!"

Another Williams survivor had gotten separated from the family and stayed the night at St. Paul Catholic Church.



Paul Williams buried almost his entire family at the cemetery in DeLisle

Lawrence Williams, a living brother to Malcolm Williams, states that the intervening years have not been easy, but he still considers himself blessed. "I live with it every day – they say Camille was no Lady, but to me she was – because I've been married to her for all these many years!"

They both lost their mother, ten brothers and sisters, and two of their older sister's children. And, still missing and unaccounted for, is a brother, Otis, who when found, Lawrence would like to have the remains moved to the DeLisle Cemetery where the large Williams family now "Rests in Peace."

Evergreen at Gulfport

Faith, Hope, and Charity

Unidentified and described as follows:

White female, age 60s, 140 pounds, 5'8"
White female, age 30s, 135 to 140 pounds, height unknown
White female, age 40s, 105 to 110 pounds, 5'2"

These bodies were found near the downtown Pass Christian beachfront. Some people speculate that they may been driving on Highway 90 at the time that the tidal surges started crossing land.

There bodies were sent to Gulfport and, when unclaimed, were buried. A full service burial was performed by the Lang Funeral Home which took place at the Evergreen Gardens Cemetery.

Also, at the Evergreen Cemetery, many other deceased victims from Pass Christian were buried. At that time, the local cemeteries had been laid desolate from the flood waters. Therefore, all of the interred bodies had to be sent out for burials at different places as far as Hattiesburg..

In one instance, a husband was laid to rest by his second wife only to be exhumed at a later date by his first wife, who then had him re-buried in his home town.

The only Pass Christian burials that took place were at Live Oak Cemetery. These were the two bodies that had risen from their graves due to the flooding. At the time, they were recent burials where the newly turned soil had not become firm enough to hold down the caskets.

The Williams Family buried all of their dead at the cemetery in DeLisle.

As a unique reminder of the devastation, the Pass Christian Housing Authority established a housing development called "Hurricane Village" — with streets named Audrey Betsy and Camille

Getting to the Truth

During the first days and weeks of confusion following August 17th, 1969, there were stories picked up and disseminated through the national press which have been perpetuated over and over again, even continued each anniversary date by the local media. News accounts from the first year have been rehashed and reprinted without correction or edit of new findings. For the first time, during the 30th Anniversary of Camille Remembrance, there has been an attempt to correct misspelled names and to authenticate the number of deaths accountable to Camille.

3-Story Richelieu was flattened to mere rubble.

From early on, the *Pass Christian Tarpon Beacon* printed some correcting accounts during the decade that followed the storm. In the case of the famous "Richelieu Hurricane Party," *Beacon* Editor, Parnell McKay reported that a young lady had appeared at the Second Street office when he was still the Pass Civil Defense Director. It was the Tuesday following Camille's passing. She stated that she had left the Richelieu Apartment building early that Sunday morning. She brought up the subject of how a Seabee had told her that there were "21" killed at the Richelieu. She said that the Seabee had counted 21 bodies on a truck.

In the case of the famous "Richelieu Hurricane Party," *Beacon* Editor, Parnell McKay reported his true findings that brought the total to 8 deaths

Parnell had told her, "Well, ma'am you are greatly mistaken, most of those bodies were members of the Williams family who had 13 members that had perished in Trinity Church. These people were Negroes. How many Negroes did you have living in the Richelieu?"

"Well, there were none," she said, "but the Seabee told me he counted 21 bodies that came from the Richelieu. They were in the truck parked right there."

Parnell went on to state that Hester Lizana was the driver and owner of the truck who had three or four bodies from the Richelieu, which brought the count to eight lost once the remaining bodies were found days later.

Parnell figured that it was that same young lady who had reported the story on national television. Since then many accounts have increased the number to 23.

There were unreported casualties.

Not published in any news media was the situation that occurred during the first two days following the storm. In one case, there was an attempted break-in to a private residence by two men in uniform. A neighbor across the street went out to confront them with a rifle drawn and the would be thieves scampered off.

In another case, there were early morning rifle shots that rang out. Deputized authorities told several residents that they should stay away from that particular district while prisoners were being used to clean up the debris. It was later found out that one of the prisoners had been killed while attempting to escape.

The first few days were chaotic and confusing – There was a quarantine, military law, restricted traffic, hordes of trash piles, the stench of death, the threat of mosquitos, concern for the injured and the homeless, and the overall massive destruction of the city. This resulted in at least one local visionary, who evidently had the strings to big money sources and empowerment, recommending that a new city grow from it. There were even crews on stand by to bulldoze and level the whole of downtown,

He further proposed filling in all the lowlands from the railroad north to Bayou Portage as a new site for flourishing new dwellings. But most of the residents who remained to perform clean-up would have nothing to do with that idea.

To prevent their homes from being plowed under, Evacuees painted messages on the sides of their houses.

Water Lines were normal along the Coast during the first week and longer in some areas.

Long Beach

Much like Pass Christian, the city of Long Beach was couched east of the eye of the Hurricane, the most dangerous quadrant to be located in.

A tour along Hwy. 90 at Long Beach revealed boats of all sizes that had been washed up off the beachfront which had been pushed back several hundred yards by the 200 mph winds and tidal surges of 25 feet. There was total destruction to homes and buildings, including shopping centers located on the east and west sides of Jeff Davis Avenue. Debris of all kinds, including wood, steel, rest room facilities, washers, dryers, air conditioners and other materials were found lying over the entire area. Debris was stacked as high as 20 feet in some areas off the beach front. For miles inland could be found twisted and fallen trees.

Along Hwy 90

The destruction gave the appearance of having been caused by the winds of a giant tornado. Numerous oak and pine trees were uprooted by the winds, but the vast majority of felled trees were snapped and twisted halfway up the trunk line. This was clearly evident along the entire stretch of the beachfront. Two blocks off the beach, home owners were more fortunate. The wind damage appeared lessened, but the high tides left their watermarks on the homes anywhere from above the door entrances to the rooftops.

U.S. 90, the major four-lane link with civilization to the east and west, was somewhat passable. Broken concrete slabs dotted the highway that was covered with debris. Portions of it had been washed out or covered with a half-foot of sand. The former beauty of pine and palm trees formed barricades where they had fallen across the north and south lanes.

There are no longer any landmarks along the beachfront with the exception of an occasional shelled structure or leaning steel beam with a portion of the sign it once held erect.

A&P Food Mart

Believing they had owned homes on high ground which would not be affected by water, shocked families sat in wet yards and on broken sidewalks looking with disbelief at their damaged or destroyed homes.

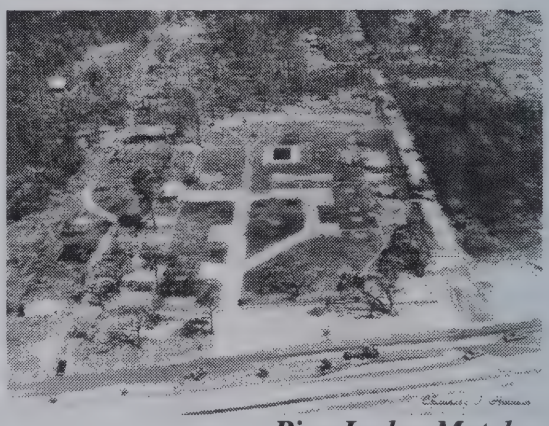
There were many injuries, many persons who should have been in the hospital, but who did not have the facilities to get there. The immediate beachfront, which took the brunt of a surf that raged as high as 30 or more feet when the tides came in, was wiped out from a point just east of Jeff Davis Avenue in Long Beach westward to the Bay St. Louis bridge, a distance of about 10 miles.

There were 11 that were killed the night of the fearful storm.

St. Thomas Catholic Church

A reporter concluded that, "About all that's left along the beachfront of Long Beach and Pass Christian is the courage of the people whose homes and businesses were destroyed by Hurricane Camille."

● Lois Toomer and her husband were planning a belated 35th wedding anniversary. Their grand soiree was announced by an invitational mailing that was "cancelled due to weather." In their announcement wording was stated, "Come, we are having a Big Blowout!"



Pine Lodge Motel

Instead, Camille blew out their anniversary plans. She spent Sunday afternoon packing away her inventory at Toomer's Bride's Shop in Gulfport and then left to Long Beach at the home of her sister. About 8 p.m. , the electric power had been knocked out "We hadn't been in there 10 minutes until we began to hear glass breaking. I looked out the south window and saw a boat five just feet away and turned upside down." When the tidal surge hit the floor furnace was raised up from the floor as water spewed through like a geyser, the toilet was uprooted from its base; and the house was pushed off its foundation. With that, the maid interrupted reading the bible aloud and said, "Miz Toomer, dis house is mooovin!"

The three women got down on their knees to pray and were swept up with the rising water as they continued to feel the house being moved until it was floated away and caught by a magnolia tree that was postured at the back end of the lot.

- Mrs. June Lemon, first aid chairperson of the Gulf Coast Chapter of the American Red Cross, spent Camille night caring for the needs of 2,000 others in a shelter at Long Beach. She expeditiously herded them through the terrible night. Upon reaching home the next morning at West 5th Street, she found her home had been torn apart.

- A devoted Girl Scout Leader who cared for an elderly wheelchair bound patient at her beachfront home on Sundays, refused to leave her ward when she found that she couldn't save her from the rising tide. Together they met death bravely in the rising waters. The week following Camille, three Girl Scout state officials searched in vain for their missing member.

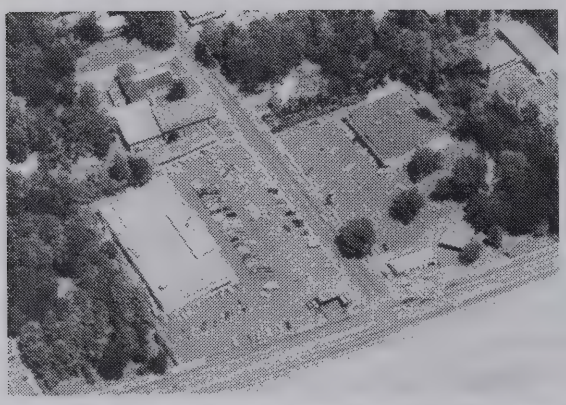
- Sam and Pat Maxwell had no intention of staying. We're not stupid," said Sam. "We were going to leave, but we couldn't." After spending all day Sunday and the early evening hours boarding up and packing, the Maxwells opened the front door just as a huge tree uprooted and fell across their Buick. As the water flooded into his home, Maxwell pulled down the disappearing stairway and sent Pam into the attic. Remembering their Chihuahua, he descended to wade through 5-feet of water to fetch his dog.

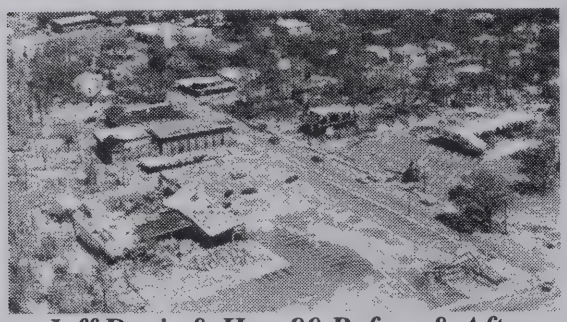
- Boggsdale was totally demolished. Mary Boggs Morrison had departed to a wedding reception where she safely remained the night in a hotel.

Friendship Oak Memorials

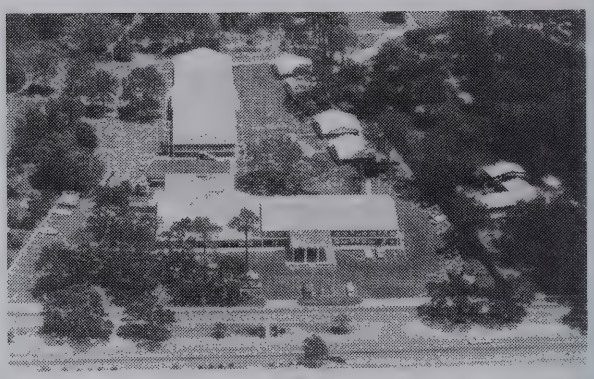
Camille left many areas of the Coast leafless. In 1973, for the 4th Anniversary of Hurricane Camille, the aged Friendship Oak, which had remained in tact, became the mother to 100,000 seedlings that were grown from acorns harvested from beneath the old limbs. Friendship Oak babies were planted from Waveland to Pascagoula and as far inland as Wiggins. The program to repopulate the Coast was promoted by the State Department of Agriculture in conjunction with the forestry nursery at Lucedale. Some of the trees have since, reached 35 feet in height.

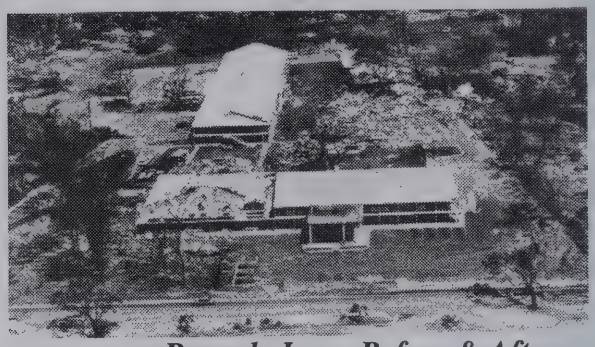
Memorials from Long Beach can be found all over South Mississippi and are producing new little acorns.





Jeff Davis & Hwy 90 Before & After.





Ramada Inn – Before & After.

The Caribe Apartments & St. Thomas Church.

Lang Ave at Hwy 90

Using their Wits

At West Beach Area

Jean Coumer and her husband were typical sailors – capable of braving the waters and handling most sportsmen emergencies. They had been to the beachfront that afternoon and could hardly believe that the storm signs were much different than the "blows" that they had previously experienced. They went back to their house a half block off the beach and routinely tied down their sailboat that was on a trailer. There were two ropes left over and Mr. Coumer asked his wife, "What should I do with these?"

"Just hang them on the branch of the Magnolia there," was her reply.

They went about their business in the house preparing for a "blow." An hour passed when they decided that maybe they should evacuate, but radio reports indicated that Hwy 49 was blocked with heavy traffic. This convinced them that they should just bear the storm. However, when the water started rising they knew they were in for trouble. Mr. Coumer suggested the attic as a place of last resort, but Mrs. Coumer said she would rather take her chances outside.

Pitcher Point at Hwy 90

As they departed out their front door the water was waist high – all they carried out were flashlights, and they could see their car bobbing with the waves. They reached the Magnolia tree where their boat was – being avid sailors, they each donned life-jackets – by then water was over their heads. Immediately, they grabbed the ropes that were left hanging from a few hours before – and they wrapped themselves around the tree trunk. As the huge waves plunged them under, they held tight to the ropes that encircled the tree trunk. As the water rose, they shimmied the ropes up the trunk much like a lineman climbing a utility pole. They quickly learned to keep the Magnolia as a shield against the rolling surf and wave action. Several times the force of the waves almost dragged them from their perch, but they held on bracing themselves behind the tree but realizing that it would be dangerous to tie themselves up. They held on for the duration of nearly eight hours. The only time they could see was when the sky was lit by lightening and they could get glimpses of passing debris. They even saw their next door neighbor's Volkswagen go floating by.

It was about 3:00 a.m. when they felt the water receding and they could hear voices in another tree not too far from where they were. Mr. Coumer climbed down and went into the house since he had the only working flashlight. He reported back that everything in the house was gone. Later they discovered that only the roof remained.

Mrs. Coumer then noticed car lights a short distance away. They presumed rescuers, but the car didn't move, so they walked their way through debris to find that strangely enough, it was their own automobile with lights that had shown brightly. It was still raining and the winds were still blowing so they got inside the automobile as the only place of refuge. Upon hearing voices again, they yelled out – it was their neighbors, a husband, wife and three children who also survived by clinging to a tree – but only the children had life jackets. They were welcomed into the back seat of the car and they all waited for day break.

The sun broke the horizon shining brightly and the warmth crept over them.

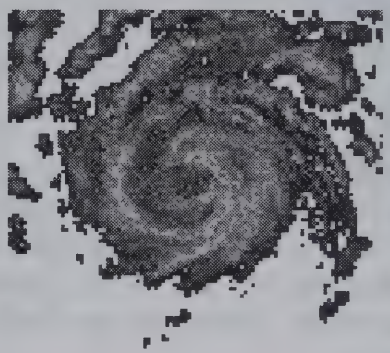
They lost everything and rebuilt their place that they loved dearly. Jean Coumer believes that it was "preordained" that those rope ties were left hanging on the Magnolia tree. It was their only salvation in addition to having life jackets and a Survival Technique.

St. Thomas Catholic Church Areal

St. Thomas Church

There were 21 reported deaths at Long Beach:

Deborah Bennett Berry
Merland John Boyer
Myron F. Bundy
Edward M. Farmer
James Beryl Farmer
Helen Iva Mae Holifield
Phoebe L. Jones
Charles D. Jones
Frances E. Kassum
Elsie Logan
Frances Ann Magee
Stacy Diana Magee
Emma Clare Mayer
Jessie Lucinda Nelson
Elmer Lawrence Nelson
Fannie E. Savage
Fred N. Schustedt
Charlotte R. Schustedt
Arthur P. St. Onge
Selma F. Sykes
Leone Welch



Bay St. Louis – Waveland

Storm wrecks Bay-Waveland area

The Bay St. Louis-Waveland area in Hancock County suffered severe damages from Hurricane Camille, but was more fortunate than neighboring Pass Christian across the Bay of St. Louis. Four persons were reported drowned from the storm as compared to larger numbers from adjoining areas.

In Hancock County most residents live in low-lying areas. In the hamlets of Lakeshore, Clermont Park, Pearlington, Ansley and the Cedar Point section of Bay St. Louis, destruction was almost complete.

Beach Boulevard at L&N RR bridge approach.

At Clermont Harbor, the destruction was total, and eastward to Bay St. Louis many hundreds of beach homes were destroyed.

At the Mississippi Test Facility, southeast of Picayune, some 1600 refugees took shelter Sunday night (17th). The high winds and water knocked down some overhead power lines and flooded the underground lines. Emergency generators were put into use but operations at the facility were suspended until Tuesday.

The Bay St. Louis business district sustained heavy damage, especially those businesses south of Beach Drive which were described as swept away. Storm surges of 15 feet and higher and devastating winds turned beach houses into stacks of driftwood. The Merchants Bank building was heavily damaged on its ground floor while Hancock Bank facing Beach Drive on the north side had only

Old Town along Beach Blvd.
Note – Hancock Bank at Center

superficial damage. Homes along the beach were swept away, including those of state Rep. Walter James Phillips, located about 200 yards from the beach, and former publisher Powell Glass, lodged at the beach. North of the U.S. 90 bridge over the bay, heavy damage from high tides was reported, but comparatively less from wind.

South Beach Blvd. In front of Old St. Joseph Academy.

The Louisville & Nashville Railroad bridge over the bay was reported in fairly good condition, although the tracks and power lines alongside of it were swept away. The U.S. 90 bridge, however, was buckled considerably, but passable for light traffic. Fires raging at the height of the storm's fury destroyed a number of businesses along Coleman Avenue, Waveland's principal business district. Some Volunteer Fire Department volunteers at Pass Christian stated that they could see the glow in the skies from the fires.

No fires were reported at Bay St. Louis. The historic Christ Episcopal Church, on Beach Drive at Carroll Avenue in Bay St. Louis, was wiped out with the back wall standing. A cupola atop St. Stanislaus College's main building in Bay St. Louis was toppled by the winds but the rest of the school remained fairly secure. The Hancock County courthouse was evacuated during the peak of the storm when bricks were knocked loose, but after the storm had passed, it was placed back in service as the area's Civil Defense headquarters.

The Bay St. Louis business district sustained heavy damage, especially those businesses south of Beach Drive which were described as swept away. Four persons were reported drowned from the storm as compared to larger numbers from adjoining areas.

● Dave McDonald, now president of the Port and Harbor Commission, was chairman of the Red Cross Disaster Committee when Camille came ashore.

"We had set up shelters at what ws then Bay High on Second Street, at Hancock North Central High, and at Valena C Jones. Before the storm hit, he had supplied the North Central High shelter with peanut butter, bread, and other items where more than 300 people had taken refuge in the gymnasium. . He instructed the refugees that he would return the next morning but never made it back until three weeks later because all the roads were blocked and the Bayou LaCroix bridge was out.

Dave McDonald, 25 years after Camille, stated, "After a disaster the magnitude of Camille, there would not be a way for communities to pull themselves up by the bootstraps. The only way we were able to – was with massive federal assistance."

● In a story of faith, the processional cross from Christ Episcopal Church in Bay St. Louis was found by a parishioner amid the debris of the church. The metal cross was bent and twisted from the fury of Camille's winds, but it has since been polished and is on display in the rebuilt church. "It was more or less destroyed," said Bobbie Durkovich, parish administrator for Coast Episcopal Church. "It was found all bent up and reshaped like a the letter ***"S".*** Instead of reshaping it, church members decided to mount it on a platform and we used above the baptismal font.

South Beach Road at Washington Ave.

Durkovich, was in Louisiana during the storm. She recalled the hurricane with a dread in her voice. "I will never ever in my life forget the skies," she said. "I have never seen skies so black in my life."

● Jeep Ladner, then living in Ansley, was one of the refugees who with his family, stayed at the Kiln. High School. When the walls started caving in, they all escaped to the school's main hall ways.

Having left that night to rejoin his family, they took shelter at the High School on Second Street where about 50 people had sought security The electricity went out about 10 p.m. as explosions were heard when transformers would blow out. The ventilators on the roof were blown off letting in the rain, so many of the refugees sought other locations of safety while only about 50 remained to crowd in below the bleachers.

The day after, he checked his home at Joe's Bayou where he found a huge 200-pound-hog running about on his roof top having swam on to it from the flooding waters.

An office was set up at the Youth Center across from the Middle School where he was authorized to issue checks up to $150 to those in need.

Beach Boulevard at Old Towne with cleared street and all beach side establishments reduced to rubble.

● Bay St. Louis physician Henry Maggio was enjoying the good life with his wife, Bobbie and their three children. His practice in Bay St. Louis was lucrative and his Waveland beach home was majestic. "Everything was going along wonderful until this grand and glorious monstrous storm came roaring out of the Gulf and ate my house up," he quipped.

With news of the oncoming hurricane he sent his family to Picayune with friends and he remained because he was assigned "duty" that weekend along with another doctor. He tightened the hatch at his home, closed the storm windows and reported in to the Bay St. Louis Hospital to wait out his watch.

Within hours, the 50 patients were joined by 200 elderly refugees who checked themselves in or were carried in by helicopter. All the new guests could be accommodated by for comfort were little cots and chairs that were placed in the hallways. However, they lasted out the storm safely.

When Maggio left the following morning he first headed for the Bay Bridge and found that part of the concrete four-lane street beds were raised and stacked like dominoes. "We went down the first two blocks of Beach Boulevard to Main Street, and I looked farther down, and all the piers, houses and businesses located on the beach side were gone," he recalled.

"When I got to my 100-year-old house, I was in shock, because I looked and the entire lot was clean. There was not anything left standing except two oak trees that were hanging on for dear life."

● Chancery Clerk Tim Kellar was a boy of 12, when his father, Adolph was a Beat Supervisor. They stayed at their sturdy home on Hwy. 43 where about 25 neighboring folks started arriving with pleas for safety. After the storm, the house was designated as the Rd Cross shelter for medical attention and food distribution. The family also had an artesian well where folks lined up to fill their jugs with water.

● Lynette Carbon, the current Civil Defense Director remembers her family along with 15 to 20 mostly elderly people had huddled together in the main bedroom centered in the house at Spanish Trail. At the height of the storm the roof blew off and widows were crashing in.

● Insurance man Steve Treutel was a 9-year-old boy as he remembered his parents and five brothers and sisters had climbed the attic in the family home and watched by lantern light as the water rose to five feet.

Coleman Avenue at downtown Waveland

● Former Alderman, now Mayor of Waveland, Joe Longo recalled that the town was crowned with debris, death, and destruction. There weren't any birds because the trees were leafless, barkless, and skinless. There was an artesian well at St. Clare's Church where people lined up for fresh water. The Longo family house was on high ground but still raised 3-feet of water. Those folks closer to the Beach had to swim for his house in order to seek safety.

● Edward Socola had spent many summers in Waveland at his family's house which was built in the 1920s. It was a two-story frame house, white with green shutters just off the beach. With the impending storm, he left New Orleans to pick up his mother who adamantly wanted to remain intact and simply wait out the storm. Fortunately, she relented to his pressure – the house was totally wiped out – leaving a barren site.

A Coleman Ave. washateria had been completely demolished.

● Jennie Jenevein and her neighbors, Joseph and Nora Sheehan barely escaped the storm's rising water by climbing aboard a boat that was chained inside her carport at her home a block and a half from the Gulf beaches. The wait for daylight was frightful when they saw scorpions and snakes all around.

"Veteran of a number of Storms"

At the time of Camille, Jerry Heitzmann, Hancock Bank Branch Manager in Bay St. Louis, was a Sergeant with the Mississippi Army National Guard. His Unit was bivouacked for the routine week-end drills in the lowland area near Bayou St. Joe. The Guards spent all day Saturday with little concern for the approaching storm since they had all been through a number of hurricanes, including "Betsy" of just four years prior.

Banker, Jerry Heitzmann holds no bars as he admits that Camille gave him a lot of respect for the power of Hurricanes.

That Sunday morning resulted in the performance of normal duties – until noon time, when it became apparent that it was "coming our way!" Listening to updating radio reports began to create anxiety for the 60 or so men in the Unit. With each new weather announcement, concern for their families became uppermost in their minds, more so, since they were not allowed to leave or make telephone calls.

By late Sunday afternoon, the winds picked up with increase rapidity. Nearing dark, the water from the back canals began to rise more and more quickly, so the Commanding Officer ordered them to load the transport trucks with whatever equipment they could store. They hastily maneuvered to the Waveland Motel at Hwy 90 and Hwy 603 to ride out the storm. As the winds escalated "the whole scene became scarey with the overriding fear for families." Telephone and electricity was gone. It was now evident that the "storm veterans" were losing their resolve and their bravado began to yield.

They were quartered in the motel dining room which was walled with large plate glass windows – when all of a sudden – the sound of a cannon belching out shrapnel was the first thought that came to Sgt. Heitzmann as the first of the windows blew out.

About 10 p.m., as the storm was at it's height, the Captain observed that a vehicle that had been traveling eastward on Hwy 90, had stalled, with head lights still lit. Apparently, the driver was attempting to escape the rising waters from the low areas of the west. Jerrie Heitzmann and two others volunteered to make the rescue. As soon as they were outside the wind tossed them to the ground. The night was pitch black and the strength of the winds had a ghostly, shrilling sound. Attempting to crouch down, the howling winds pushed them along as their bodies were rolled over and skidded along the asphalt highway. Managing to crawl on their stomachs, they finally reached the eastbound lane and retrieved a mother and two children.

Sgt. Jerry Heitzmann and two other guardsmen volunteered to brave the Great Storm to rescue a mother and two children.

Sgt. Heitzmann commanded the group to maintain a shallow profile by crawling back as debris was hurtling through the air and could easily wound someone. All of them reached the motel safely with only minor scratches.

"I in the Eye"

"About midnight, the winds suddenly started dying down as we assumed that the eye was centered upon us." As everyone went outside to discover the quietness and the dead calm, Heitzmann looked up into the sky and saw many bright stars. The feeling was eerie as he sensed that he was looking through a barrel – there was no horizon – as if the sky had drawn a circle around the stars that he was observing. Then, he realized that he was in the center of a great vortex – ***"I'm in the Eye!"***

The feeling was eerie . . . it was as if a circle had been drawn upon the heavens enclosing the stars.

In spite of the bright stars, everywhere else was dark. With flashlight in hand, he walked around looking at the damages. Utility poles were either leaning or broken in two, trees were uprooted and toppling, automobiles were turned on their sides or pressed against each other, and debris was everywhere. He noted that all of the devastation had a certain rhythm – everything wsa bent or lain in the same direction.

Within 20 minutes, the Guards were ordered back to the motel as the winds started up once more – but from the other direction. "The awesome experience of enjoying the Eye was over – Round Two had begun." The winds were gushing forth at 200 mph once more.

Once inside, Heitzmann had time to reflect that the hurricane had been more like a Giant Tornado. It was very compact, he could sense that it had a very defined eye-wall – it was fierce, and not too far distant from where he had stood – it surrounded him with tranquility as he was looking up at the stars in the heavens – and there was no rain . . .

Heitzmann noted that what the storm's first pass didn't damage, the second pass finished off.

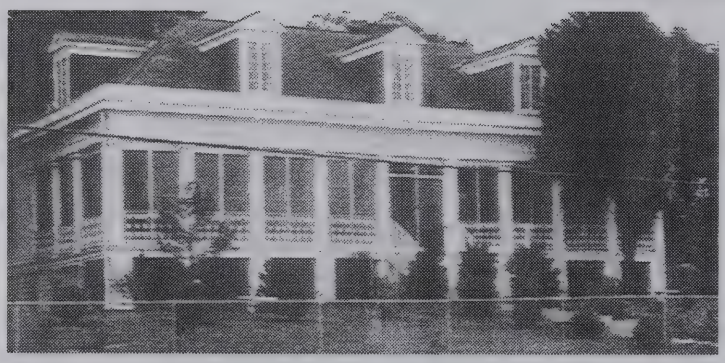
By daybreak the back side of the storm had completely passed. The whole sleepless Unit went outside to better observe the damages by daylight. The destruction was unbelievable. Heitzmann noted that what the storm's first pass didn't damage, the second pass finished off. All of the trees and poles that had been leaning in one direction by the wind's leading edge were now strewn in the other direction, but then completely collapsed by the effect of the storm's trailing edge. Automobiles were scattered all over, telephone wires were bundled like spaghetti, large billboard signs were crumbled and reshaped into twisted pretzels. Off to the south was a deep orange glow caused by flames and smoke. He later found out that it was downtown Waveland. With no rain and the heavy gusting wind bands, Waveland was left defenseless.

The Guards were ordered to mount their trucks and to disburse throughout the area to seek out troubled survivors. "By 8 a.m..," Heitzmann noted that, "the day was Sunny and everything was bone-dry."

Finally, on the following day, his Unit was relieved of duty to attend to their personal families with the arrival of replacement Guard units. Bay St. Louis continued without electricity for nearly six weeks, but citizen spirits were high and the townsfolk were thankful that their losses were not as severe as that of their sister city – Pass Christian.

● The Watson family of Clermont Harbor in Hancock County wanted others to know that their house was gone – but they were safe and unharmed – so the hearty souls left notes behind for their relatives and friends to know that they went off to New Orleans following the storm.

Much like a mural, they painted signs of good health.



Before and After

Fight not Flight

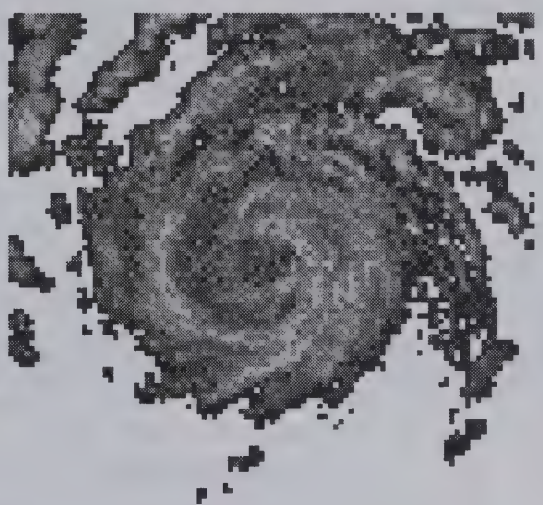
Waveland is the only community with an Historic Marker etched in gratuitous terms regarding the City's arduous recovery during the months that followed. In May, 1972, the marker was dedicated with gratitude to its citizens and for the aid provided by government agencies, organizations, churches, and individuals. The *"Survivors' Marker"* fronts the Waveland City Hall on Coleman Avenue.

Following Camille's disaster, the City of Waveland had to borrow nearly $328,000 to clean up and repair the extensive damages to its infrastructure. The debt was not paid out until 1995.

FROM THE PEOPLE
OF WAVELAND
In appreciation and gratitude
to all who gave of their time,
energy, and money to help us
recover from Hurricane Camille.
On August 17, 1969 our city was
devastated, but those who
cared came to her rescue.

Those reported as Hancock Camille Victims were:

Col. Karl S. Axtater
Mary Eaton
Mamie Gianelloni
Capt. William Henry John
Mrs. Bessie S. John
George H. Kamlade
Roosevelt Palmer
Hattie Bell Plummer
Peter J. Rabito



Gulfport
Scenes on Monday Morning

Much of the Port of Gulfport was swept away, including a cat food factory, ships were pushed on land by Camille's waves, and two had to be cut up for scrap.

Ships were beached during the fierce storm.

In the Gulfport harbor, damage was severe. Three large cargo ships, the *Alamo Victory, the Hulda, and the Silver Hawk* were badly damaged and washed high aground at the north end of the harbor. At the banana wharf, all the sheet metal was stripped from the structures, but most of the framework was intact. On the west side of the harbor, most of the damage was to the lower walls of the buildings where the battering-ram effect of floating cargo carried the sides away. A large diesel fuel barge lifted out of the harbor, carried ashore, and deposited on the medial strip of U.S. 90. Farther up the beach was a large oil storage tank that had floated several miles from its original position.

The recreation room and boiler room of the Veterans Administration hospital was leveled. The American Legion, with its plush Caucus Room Lounge on Gulfport East Beach near the hospital, was virtually destroyed.

Destruction – Hwy 90 at 25th

A fire was smoldering in one gutted beachfront house many hours after the storm had passed. The Parliament House and Maison de Ville, Gulfport beachfront apartments, were torn and battered. Six gasoline pumps were all that remained of a once busy Highway 90 service station.

Houses had been blown fully intact from their foundations – jammed against a neighboring house. The guard rail around a once-treacherous Highway 90 traffic curve at the VA Hospital, had been torn out and settled neatly along the lawn bordering two homes. Trees in many yards were twisted out from their base and rammed into dwelling roofs.

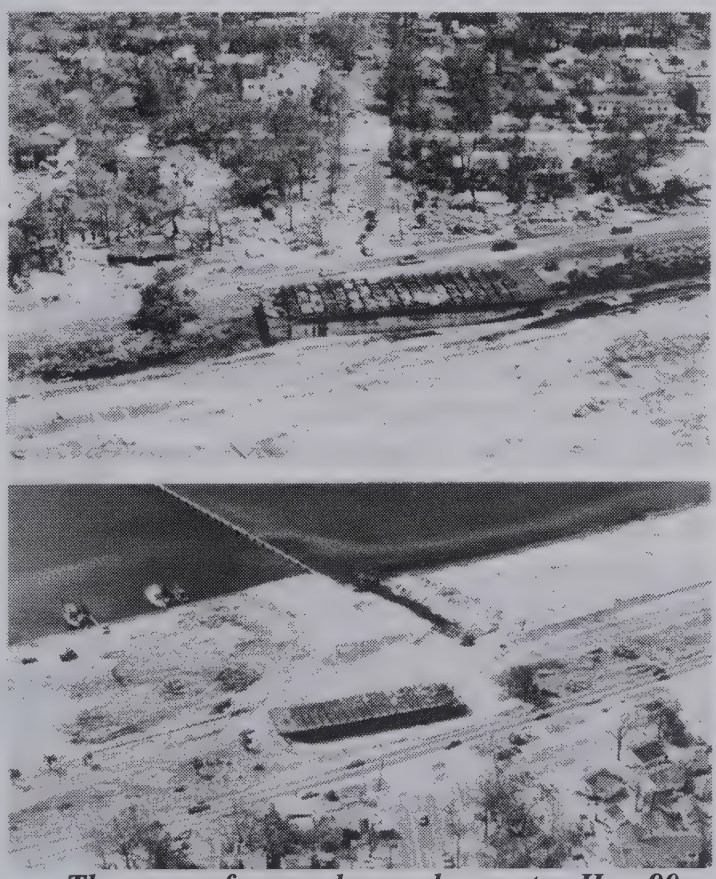
In a number of instances, Camille gouged out single rooms from upstairs or down, leaving an adjoining room relatively untouched. Clothes were strewn everywhere, over shrubbery, along highway signs, and atop the remaining splinters of the Mississippi City pier.

The Reserve Marines at the Navy Seabee base set out on amphibious tractors, and at one house in Bayou View cut a hole in a roof to rescue two young girls. They also moved people from a collapsed Red Cross shelter.

Jones Park, Hwy 90, & Downtown area.

A weary National Guardsman was seen seated in a battered lounge chair, which he perhaps extracted from a doctor's office. He was taking a long needed break while manning his post in downtown Gulfport near the First Presbyterian Church. The Coast was put under limited martial law after the storm. Some were heard to say they had "had it" for that neighborhood; but some others said they'd rebuild and hope there would not be another blow of Camille's scope for another 30 years.

Downtown Gulfport was littered with glass and tangled power lines. A 26-foot sloop had been washed two blocks from the harbor area into the city and was parked high and dry in front of the First Baptist Church. Office furniture, desks, chairs, filing cabinets, tables and books were in the streets. Near the devastated State Port of Gulfport a gas main had broken.



The surge of waves drove a barge atop Hwy 90

The 190-mph winds gouged chunks of brick out of the First Baptist Church, knocked the awning off the *Daily Herald* building and swept water into the newsroom, advertising offices and press room.

Suburban areas of Gulfport were heavily hit by falling trees crashing through the roofs of homes.

Three ships ran aground at the State Port, carried ashore by 20-foot tides, which accompanied the big storm. All three had decided to ride out the monster hurricane, moored to the west pier wharves. The strong winds lashed the ships from the moorings. All structures except two large marine tanks and the port banana terminal gantries were swept off their foundations.

Buildings, including homes and stores, were shattered where they faced the beach. Tides swept into the downtown areas, tearing out the walls of concrete and steel structures. Gulf National Bank, located at the junction of U.S. 49 and 90, was opened up throughout its ground floor with ledgers and other bank records scattered about.

A sailboat idled at First Baptist Church

In the downtown area immediately south of U.S. 90, the Mississippi Highway Patrol District substation, Chamber of Commerce offices, the Gulfport Little Theater, the Teen Center, and the month-old Gulfport recreation center, a new $160,000 steel structure, were all destroyed leaving only a mass of rubble and twisted beams. Warehouses, offices and other facilities in the port including new construction projects were out of action.

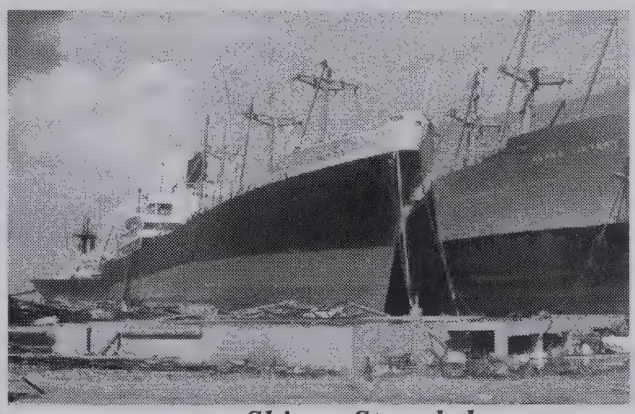
National Guard personnel patrolled the downtown and other areas to prevent looting. Electricity and water services were out. A section of a large warehouse at the U.S. Naval Construction Battalion Center, which housed some 2,000 evacuees, collapsed during the storm. There were several injuries. There was wide spread damage at the sprawling Seabee Center where battalions are trained and home ported in deployment to Vietnam. Barracks housing men and warehouses containing valuable equipment were destroyed. Naval officials said five persons were confined at sick bay in the shelter pending transfer to the Keesler Air Force Base Medical Center in Biloxi when travel permits.

A temporary haven with Flag a'waving.

Cadillacs and Town Cars were converted for use as service vans as the owners stuffed huge boxes of clothes and personal belongings that were hauled to places of safekeeping.

The $100,000 Recreation Facility was opened the month before.

● "We were too busy to think," Michael Mahalak, then a 19-year-old Gulfportian, recalled later. "There were times we heard things scraping under the hull of the tractor and we didn't realize until later that we were going over trees and cars. During the storm itself we kept seeing these weird lights, a strange purplish color that we thought must be exploding transformers. The wind was blowing so hard that we had to wrap towels around our faces to keep from getting hurt from the flying debris." Luckily he didn't have to rescue his own parents in their home near Brickyard Bayou because they had checked into the sturdy Edgewater Hotel. His mother, Doris Mahalak, was to celebrate her August 17th birthday, but in the rush they left the cake and celebratory wine behind. They both floated along with everything else in the house. "Oh, those were bad times, but you tried to laugh a lot," Mrs. Mahalak said. "They were sad times; we lost a lot. They were happy times; we were alive. I still have several bottles of that wine left, unopened. They just floated around." Remembering, she smiled: "Maybe someday I'll open one. Maybe it'll just be vinegar."



Ships – Stranded

● A young 20-year-old polio victim confined to her bed was dependent on artificial breathing apparatus for her life support. The power went off at 9:10 p.m. on that Sunday night. Nursing Center Director G.H. Rawls, Jr. had only one battery to sustain life for 4 hours. Rawls went outside to a row of parked automobiles and one by one, extricated batteries while the wind was whipping him around and slamming closed the raised car hoods. In addition, that night he supervised over 50 elderly patients who were not able to evacuate.

Debris was scattered everywhere

Helicopters were used for evacuation and to bring in vital supplies.

- Six hundred patients were moved from the Gulfport VA Hospital. Three hundred were flown to Tuscallosa, 210 to Tuskegee, and 90 to Augusta, Georgia.

- A Philippine couple were at the Gulfport Hospital expecting the birth of their first child. They were moved from room-to-room as window panes burst and showered inward. Soon after the first calm, their son was born weighing in at 6½ pounds.

- The new $900,000 Harrison County Library in Gulfport before Camille stood as a shining example of progress. The attractive glass and stone structure was filled with books, unfortunate food for Camille's wet appetite. When the debris-strewn water swept through the first floor, it deposited a dead German shepherd on the bookshelf titled, "Animals We Love."

- Sam Owen, a popular real estate and insurance businessman had decided to ride out the storm because he believed that he had built a hurricane-proof house. Owen, his wife and several others died when Camille waters swept through the beachfront Gulfport raised structure. For years, the platform stayed on the empty lot as a sad reminder of the hurricane.

The Sam Owen's home could not withstand Camille's winds.

- Along Gulfport's fashionable East Beach, consisting of homes of millionaires and semi-millionaires as valued in 1969 standards, exceeded well over $10,000,000. The Daily Herald (now Sun Herald) reported the following results of the 114 residences that lined the Beach before the storm struck. Six left standing with less than major damage; Ninety-nine were gutted or torn from their foundations; – and Nine were entirely missing – they had been torn apart, board by board, being blown or washed away into back allies and side streets.

The six left standing with least damage were located well back from the beach highway or on elevated points along the 20-block drive. Most of the original residences were two-story brick and frame. In many cases, Camille left the second story intact, ripping out the lower floor almost entirely.

The Merry Mansion of Mississippi was originally the Italian Consulate until World War II. It then became a classy night club, dance hall, and Gambling Casino. The picture above was taken following the Hurricane of 1947.

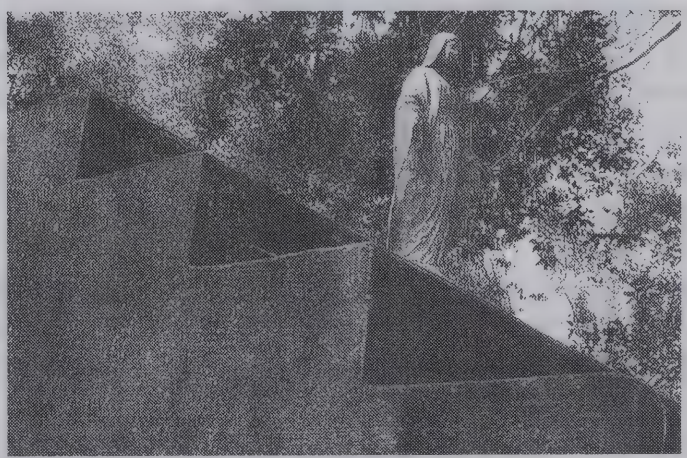
● Gulfport attorney Robert Taylor arrived at the small craft harbor bright and early that Sunday morning to move his sailboat around to the back bay area simply as a precautionary move. But, in maneuvering the boat near Deer Island at Biloxi, he was caught by a sudden squall, causing him to retreat back to Gulfport and tied up his craft as best as he could. Leaving there, he went to his Second Street home off the beach as it was now mid-afternoon. He buttoned down the house and was joined by friends to wait out the storm. About 10 p.m. the water began gurgling in beneath the outer doors of his brick home. In no time the water had risen to waist deep and they were fighting the furniture. and appliances that were bobbing up and down.

"Then there was another surge of tide and all of a sudden, it was up to our necks." "We were hanging on to the hinges of the metal lacing of the front-door pillars to keep our heads above water." "We saw my neighbor's kitchen coming down the drive." "As the storm began to subside, we caught a whiskey bottle floating by, opened it, and drained it to gain new resources." "That was the shortest-lived bottle of Courvoissier you've ever seen!"

The Merry Mansion after Camille.

At day break, Taylor said that the neighborhood, "reminded me of bombed cities I had seen in Korea."

● Indeed, Camille-vacated lots still dot the coastline, though they are becoming fewer as the Coast experiences a building, economic and growth boom. One of the remaining houseless lots, in west Gulfport just east of the Chateau Charmant Condominiums, is still home to two sets of steps. Atop the uppermost step stands a statue of Mary, the mother of Christ and a poignant reminder of the faith that carried many through the storm's aftermath. The house belonged to the late Mary Bertucci Cabibi, who in the late 1940s



bought her family home near Woodward Avenue from her parents for $1. Although it had withstood the 1947 hurricane, there was so much destruction nearby that the Cabibis decided they'd never weather another hurricane in it. For Camille, they went two blocks north to stay with their daughter. Camille water inundated the daughter's house, but wiped clean the beachfront homestead. Mary and John Cabibi, who owned a Gulfport shoe repair business, observed their anniversary five weeks after Camille. "They celebrated 50 years of married life with nothing, not even a set of sheets," said their daughter Toni Todaro, who will pass the empty lot on to her children. "At 71, my Momma and Daddy picked up the pieces, and they didn't cry. They bought a house several blocks away, further from the beach. "We were born and raised Catholic, and after Camille, Momma put the statue on the steps and put a fence around the empty lot."

- Mickey Touchstone of Lyman didn't find out till weeks later, that his personal paintings had been attacked by Camille's north winds, blowing his paintings southward for 10-miles to settle upon the beach area near the Sea Isles Motel.

The Sea Isle Motel complex next to the Merry Mansion at east.

- The S.S. Hurricane Camille, a renamed tugboat, is visible at a souvenir shop on U.S. 90 in Gulfport. The boat was deposited about 100 yards north of where it now sits. This photo, as the sign indicates, was taken last year when Hurricane Georges threatened. Coast natives need no name to remind them of the destruction and wrath left by the August 17, 1969, hurricane. Anyone on the Coast at that time will say, "She was no lady."

The Great Storm was Camille. She left utter destruction that through the years served as a reminder to residents to never take a storm for granted. Few of her scars exist today, but those that do elicit memories of one horror-filled August night. Vacant, weed-grown lots dot the landscape from Biloxi to Bay St. Louis. Some are marked by sets of steps, others by flat slabs, reminders that on those spots once stood homes.

S.S. Hurricane Camille

- A section of a large warehouse at the U.S. Naval Construction Battalion Center, which housed some 2,000 evacuees, collapsed during the storm, causing some injuries.

● As *Daily Herald* reporter Jimme Bell avoided fallen trees and debris on the way to his Gulfport office, he got snarled in a traffic build up at the old County jail near the L&N Railroad crossing. After having struggled through detours, downed power lines, and overturned trailers for nearly an hour, he was detained by National Guardsmen demanding credentials in order to enter the city.

Exclaiming that he was a news reporter gave him no quarter. Fortunately, Richard Glacier, a fellow reporter dubbing as a Civil Defense Volunteer, he was cleared to pass through the Military Quarantine.

Motel owner Fairchild, kept his Flag waving while he was rebuilding at Mississippi City.

Upon reaching his office he found that everyone else was already out covering the news. The evening Herald crew of Ted O'Boyle and Ron Elias had spent the night at the Herald Building on 14th Street so that they could be on tap when the storm subsided. Also, waging through the night was Editor Bob McHugh who took time to shave using the water that dripped down through the ceiling. Otherwise, the building was in tact and operable.

For several days afterward, the *Daily Herald* was printed at its sister newspaper office in Columbia, S.C. Printed papers were flown back daily and hand-delivered locally. Editor Bob McHugh took his post in the middle of 14th Street with an armload and gave away free copies to passing motorists.

In longhand and by candlelight a week after the storm, Daily Herald reporter Jimmie Bell noted: "Not till the black of night was finally broken did we know Camille had brought us to our knees.

Thirty years later, Jimmie commented, "Our past was now beyond our easy reach - our way of life a ghost 'mid fallen trees. Today, little remains that points back to a night whipped by winds in excess of 200 miles per hour. The Coast quickly went into a rebuilding mode that after three decades can be deemed a success."

Leisurely at First Presbyterian.

● Dr. Robert Mitchell was about to deliver a baby at Memorial Hospital the night the lights were blown out by Camille. Using only scant emergency candlepower, the birthing procedure went forward on schedule. The mother and child were in good condition and when asked by the doctor for the baby's name, the mother responded – "Why, Camille – what else?"

● Jim Landrum, Jr. decided to ride out the hurricane at home while his parents sought safer quarters at the B. Frank Brown Gymnasium. When his parents lost telephone contact with him, the next morning they were eager to rush home. Climbing through the debris, they found their home totally demolished with no sign of their son.

Not knowing what to do next, the fact that Mrs. Landrum had stepped on a nail, caused them to go to Memorial Hospital for a tetanus shot. Upon registering, a nurse rushed forward exclaiming that their son was being treated for a head injury.

As the son told his story, he had attempted to reach the roof of their house when part of the neighbor's roof slammed against his head. He remembered clawing on to refuge in the water until he reached high ground where he stumbled along until being stopped by a motorized patrol that was looking out for potential looting. They then brought Jim, Jr. to the hospital.

● Reiman's Funeral Home went into action as a MASH field hospital. They evacuated 157 inured persons from Memorial Hospital and transported them to the Gulfport Airport during the first hours of the Coast tragedy. By 9:00 a.m. that Monday, they sent personnel to Long Beach and Pass Christian. Cutting a corridor by using chain saws – they cut a passage for ambulance service to both communities. Once through the debris, they set up two emergency hospitals with Reiman personnel. By the end of the first chaotic week, the funeral home service teams had transported more than 250 persons and provided mortuary services for 67 victims.

● Bill Adams of Loraine Flower Shop didn't halt his obligation as a member of the national Florist Delivery Service. He expedited a delivery that Monday following Camille. The driver, Luther Heidelberg, made the trip to Bert Avenue with a bouquet of red roses for the couple's anniversary. However, he had to complete his delivery on foot.

● Gulfport Mayor Philip Shaw gave the prisoners at the city jail the opportunity of being freed for fear that the jail house might be destroyed. Regardless, the prisoners elected to stay the evening and were unscathed.

● With the closest available telephones being located at Perkinston, the only communication link to the outside world available was by the volunteer support of Ham radio operators. One of the first to clear through to Gulfport was an Alabama operator, who at his own expense, took down hundreds of emergency messages and sent them over corresponding wave lengths to notify relatives all over the country of their family survivors.

Soon afterward, there were 35 Mobile Citizen Band units constantly relaying messages throughout the week.

Supplies and aid were constantly flowing in.

An unnamed member of the Gulf Citizens Band Club, in spite of his personal losses, unrelentingly stayed at his radio station transmitting hour after hour. His concern for the panic-stricken at both ends of the airways kept him in solace.

C-B club members from Louisiana, Alabama, and Tennessee rallied forth by traveling to the Coast carrying in their own equipment to assist in sending out life and death messages. Of great significance was that they served a vital role in directing sorely needed incoming shipments of clothing and food to operating shelter points along the Coast.

Gulfportians were most grateful for the aid response to Recovery from so many sources.

● John Foretich had made a helicopter flight over Ship Island in mid-week. He reported the 3-mile gap that had cut through the island, and through the debris build-up, he noted the downed steel-blue lighthouse – and spied two cows that had actually survived the storm.

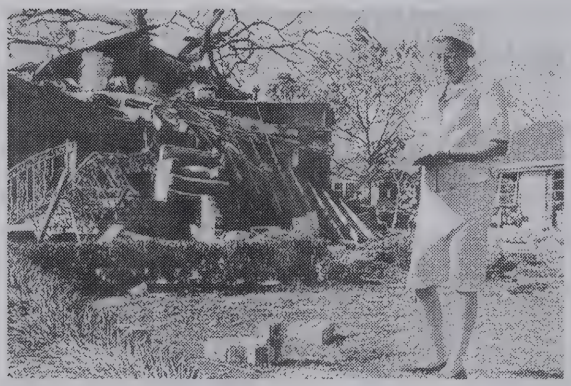
Lines were common place for the Survivors during the clean-up and rebuilding processes.

Mississippi City and Handsboro

In 1962, when Biloxi expanded their city limits to DeBuys Road, Gulfport countered by annexing the former cities of Mississippi City and Handsboro. Needless to say, the residents of those two old cities still referred to their respective areas by the old names.

Grounded boats in Handsboro, also annexed prior to Camille's destruction to the area.

● Crowley and his wife fled from their trailer home on the beach when the hurricane moved inland, but there was no refuge from the giant waves. They fought through the under tow of flooding as they sought safety on high ground. Several times his wife screamed out for him to leave her, but remaining resolute, he finally brought her to safety.



The American Red Cross, Salvation Army, the National Guard, and the ever present Seabees assisted in the massive recovery effort.

The wreckage shown here is the site of the present Grand Casino and Hotel.

Gulfport Camille Memorial

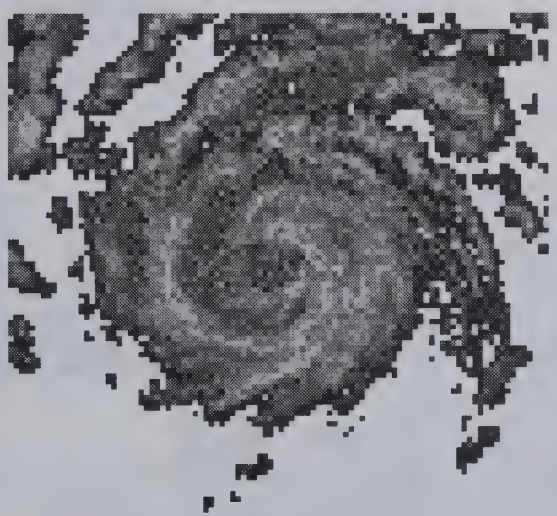
Twenty years after Camille, on August 17, 1989, Gulfport citizens raised the funds to dedicate their monument which reads, ***"In memory of these Gulfport citizens who lost their lives in the fury of Hurricane Camille."***

The monument is planted in front of the West Side Senior Citizens Center on Hwy 90 with a listing of 14 names, two of which are also accounted for as residents of Pass Christian.

When the granite stone was dedicated, Gulfport Councilman Richard Rose stated, "It's important to remind those future generations of what can happen, and I don't want to see it happen again!" Councilman Rose, who helped raise the funds for the memorial, lost his father, Fred V. Rose, to Camille.

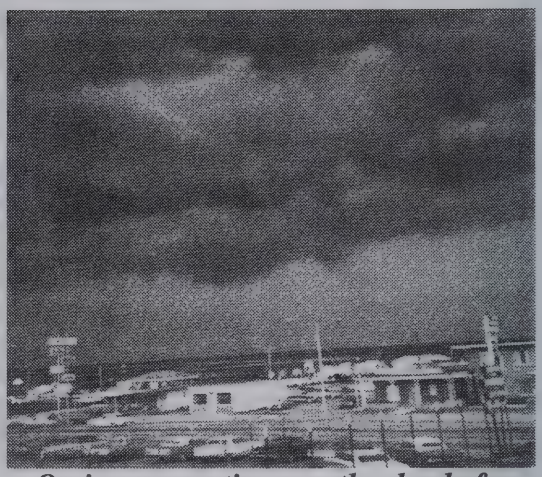
Those reported as Gulfport Victims were:

Emma Lyons Hosch
Anneas Moses
Nyme Newman
Genevieve Owen
Sam Owern
Emile Prager
Irene Prager
J. C. Rich, Sr.
Nellie Rich
Fred V. Rose
Kathleen Simmons
Albin C. Wagner



Biloxi

When Biloxians stirred awake early Monday morning, their first thoughts were to examine their homes after first realizing that they had made it through the terrible night. Most of them having weathered the destructive hurricane of September 19, 1947, knew what wind and water could do – or, they thought they knew. When they looked around that Monday morning – the scenes seemed unreal! When they left the shelters or their homes, they were confronted by the unbelievable rubble left by Hurricane Camille.



Ominous greetings on the day before.

It was blue Monday in Biloxi and if the horrors of the previous night were not discouraging enough, the seemingly Herculean task of rebuilding was just about to begin.

The beautiful, modern marina fronting the Broadwater Beach Hotel at Biloxi appeared to be intact, but at close inspection the molded concrete covers over the boat slips had corners and pieces broken off by floating debris in the high water. Buildings along the waterfront were demolished and most of the boats were either sunk, or washed away, or had been carried on shore.

Central Beach Area

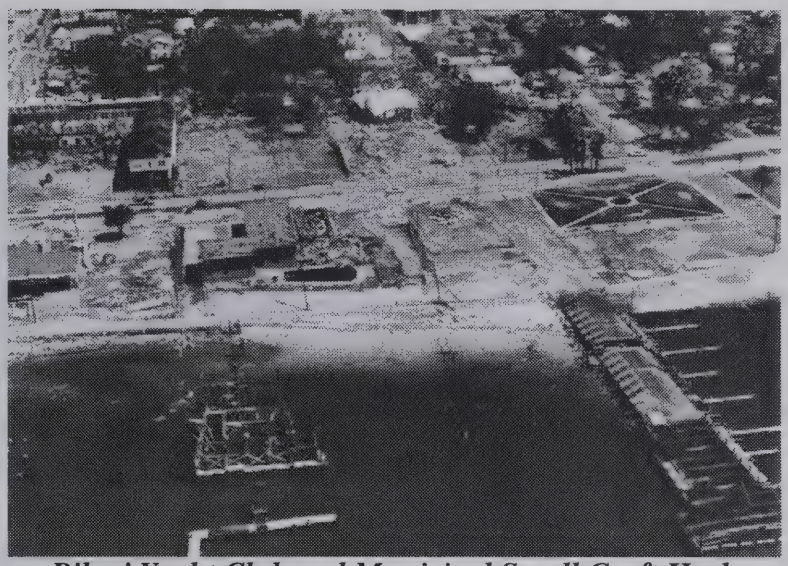
Fallen trees lay around the town, across streets, atop roofs, in peoples' yards – fallen trees were everywhere to be seen. Objects of every description had been blown about – coming to rest in odd places. The tidal surge had flooded houses and businesses – streets and lawns – thick layers of mud and silt covered everywhere.. Boats and sea craft were tossed and blown about in all areas of the peninsula. Automobiles had been pushed and tossed about – overturned – their windshields smashed, and their roofs and fenders battered.

In the block northward from the beach highway, nearly everything was wiped out – flattened – gutted and covered with debris.

Even the stately homes in the residential sections along the east and central beach – thought to be sturdy – were in the same condition of chaotic dishevelment – or were demolished.

National Guardsmen were placed at intersections shortly after daybreak to keep back the curious and the looters. The Biloxi police force was assigned guard duty in the downtown area.

In the low-lying area at the east end of town, there were only remnants of former seafood factories – homes were washed away –covered in piles of rubbish and debris – many were found blocks from their original locations.



Biloxi Yacht Club and Municipal Small Craft Harbor

Communications was gone; electric power was out; and gas company workmen were busily shutting off gas mains in order to reduce the threat of fires. Mayor Daniel Guice had appealed to Gov. John Bell Williams for help and additional manpower to handle the situation. By mid-morning, the mayor had estimated damage at well over $20 million.

The *Daily Herald* reported that in Biloxi, losses were reflected in the total or partial destruction to homes, hotels, motels, gas stations, and night clubs, many of which were left in shambles. At Biloxi, 205 buildings were destroyed from Camille's 150 mph winds and 20-foot tides that covered the area spanning from the Ocean Springs bridge and extended to the Edgewater Shopping Center.

The wooden frame houses on Point Cadet where many shrimp factory workers lived were almost entirely washed away.

Beauvoir

- The main house of Beauvoir was not badly damaged except for water that washed through the basement and having the front steps swept away. However, most of the out-buildings were demolished including the "Library Cottage" where Jefferson Davis wrote *"The Rise and Fall of the Confederate Government."* But, fortunately, the "Hayes Cottage" to the right of the main house was untouched.

- The Biloxi dead that were reported a week after Camille struck, numbered 15 in all.

Tales of human misery abounded

● The weather was calm that Sunday morning as 41-year-old Alma Anderson drove several elderly family members to church. Later that morning, the wind began picking up as a cousin dropped by the house proclaiming that the storm was likely to hit.

Flattened and left with debris.

"Well, my mother-in-law and the other old people weren't going to leave the house," Alma exclaimed.

As the storm drew near, the family braced for the onslaught of wind and waves. There was Glennan Anderson, his wife Alma, Glennan's 71-year-old mother, his uncle, two small children, and two elderly aunts.

Then, "the house blew down!" Wall by wall it was torn apart even before the water got to it. "In fact, when the house blew down, we were all hanging on to the kitchen sink as the waist high water began to engorge upon us." With the full force of the rising waters they were all torn from their anchor, tossed away to bob in and out of the rushing water that took them along a tumultuous journey. Each in turn, was rolled under water as they swallowed and choked up the salty brine each time their heads raised from below. All of them were yelling for each other – but the two elderly aunts were silent – they didn't survive.

Debris covered streets and automobiles.

Upon returning to her three generation family home site, Alma stated, "There's nothing left but the doorsteps.!"

● One father told of spending the night on the second floor of his beachfront home while the ground floor was wiped out by the surging waters and howling wind. "Thank God our lives were spared," he said.

Main Business District – Biloxi

● Buildings that were not officially designated as shelters were pressed into use late Sunday night after the ferocity of the storm became apparent. In one of these, a woman was brought in about 11 p.m. She told her rescuers who had plucked her out of a treetop, that her family sought shelter in the second story of her home and then were forced to swim to the tree when the house washed away. She held an eight-month-old baby in her arms until she was rescued. In the eastern end of town many streets were impassable because houses had been washed off their brick-pillar foundations and strewn across roadways.

● At St. Michael Catholic Church, two Irish Priests took safety from the building storm in the Church having found that the Rectory was being bombarded by severe winds. But, flooding waters began rising and the two fathers were compelled to seek higher sanctuary. All that was left to them was to climb the statues. One atop St. Joseph and the other upon the Virgin Mary. They were forced to endure their tight holds for nearly three hours.

● A beachfront motel owner, surveying the rubbish pile that had been a resort motel, said, "I don't believe it." Not one of the 10 units located north of Highway 90 was standing, not even enough of the bricks to tell where each unit had been located. He pointed to the former Magnolia Hotel. "That building has stood there undamaged for over 100 years and now look at it." The bottom floor was gutted clear through, with only enough framing left to support a tottering second story.

Baricev's Before and After

Mayor Dan Guice with visiting Louisiana mayor

● Another beachfront property owner was looking at what was formerly a two-story, brick and concrete block set of motel units and a restaurant south of the highway. He had rebuilt this property 22 years ago after that hurricane destroyed it. "It's twice as bad as '47," he said.

● One policeman said that nothing was standing, except a few shells of buildings, south of U.S. 90. Included in the buildings that were washed away were the Biloxi Yacht Club, Harbor Light Restaurant, and Baricev's Sea Food Harbor. All three buildings had stood atop pilings over the water.

● When Lisa Gollott, the young daughter of Sen. Tommy Gollott, was told their Biloxi home was badly damaged, she asked innocently: "What about the hurricane fence we just put around the house. Didn't it keep the hurricane out?"

Sun n Sand Motel

● Ken Davis's Fun House Amusement Park on West Beach had received a pounding from the tidal surge and wave action. Bumper cars had been blown out of the park into the Hwy 90 neutral ground. His office trailer was wrapped around a semi-trailer with the next door pizza house resting on top of the heap.

● Ruby J. Picard was a 73-year-old operator of an East Beach 2-story rooming house. She insisted that she was going to remain in the house since she had weathered the 1947 Hurricane. This induced her tenants, two military personnel, one who had a wife and infant child, had given up debating whether to stay or leave for a shelter. Stay they did, but as they attempted to reach the attic to escape the fast rising water, the walls of the second floor caved in.

"It sounded like the face of the earth cracking open," she later commented.

The last she remembered when the walls opened up, was the two men grabbing the young woman and the baby and shoving them onto the limbs of the nearby tree. –And that she lost the grip of one of the two men, and she never saw him again. She also watched her remaining

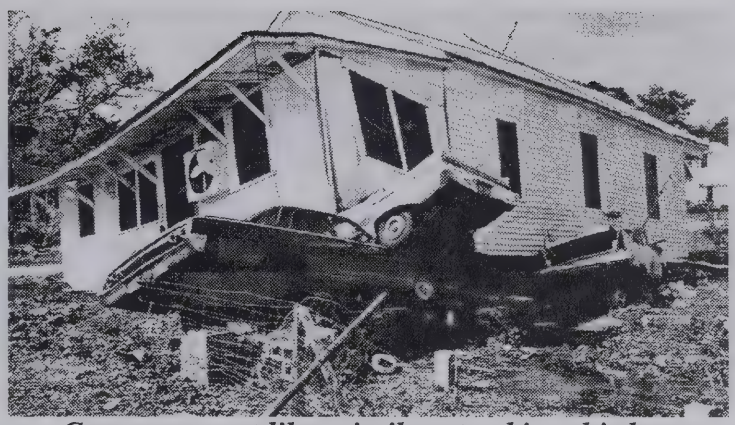
tenants disappear into Camille's swirling abyss.

Struggling with debris throughout the night, she was found battered with a missing finger from her hand.

With the irony of the situation she told the doctors from her hospital bed, "I need to get hold of that fellow on the TV right away,"

"Who?" they asked.

"John Cameron Swayze, of course!" "Look, my Timex is still running!"



Cars were sent like missiles attacking this house.

The 73-year-old Picard was referring to the newsman who had become an advertising icon during the 1960s – claiming that "Timex takes a lickin' and keeps on tickin'."

● As read in Jimmie Bell's "Flash Back," restaurateur Gus Stevens lost four of his business among his tourist service facilities. However, his Biloxi based dining room was saved, and in gratitude he offered free water, day or night, which was followed up by free ice. The saving grace to his building was a tractor trailer that was parked alongside and apparently took most of the brunt of wave action and debris, thereby protecting the plate glass windows of the restaurant.

● The storm's waters left the Morgan City, La., trawler *Wade Klein* on the lawn next to Sterling Dees' home on East Beach Drive in Biloxi. Its owner chained it to a tree until the insurance settlement. "Heavy equipment came in and drug it off," Dees said. "I don't think they put it back in the water."

Dees saw the rebuilding effort on the Coast. He was a part of it, having to move his house back onto its foundation, inch by inch. Some of his neighbors weren't so lucky. "The vacant lots you see on the beach, those were remnants of Camille," he said. "Every one of them had a house on it. Most of them that could rebuild, rebuilt. If they couldn't, they bought another house. They weren't about to leave Biloxi and let a storm drive them off."

— But Camille wasn't just another storm. "I went through the 1947 hurricane and that was pretty bad itself," Dees said. "People thought they could survive it. It wasn't the same storm."

A Postcard named "Frances"

- News from the military were that Keesler Air Force Base was expecting large cargo planes that were carrying equipment, supplies, and material – to aid and to help out in clean-up operations. A National Guard officer said he had 200 men assigned to Biloxi – they were assembled in Ocean Springs, but had no way to cross the Bay of Biloxi. Both the Biloxi-Ocean Springs and Back Bay Bridges were out.

- Biloxi's first Camille Cleanup casualty was a 42-year-old Mississippi Power Lineman who was accidentally electrocuted as a result of making contact with an energized power line.

- Ab Jackson, proprietor of the Bay View Hotel at central beach and a veteran of two hurricanes, likewise decided to stay. But he told the tenants they could make up their own minds. Thirteen of his guests, including three women and 10 men, elected to stay.

During the course of the evening, Ab and his 13 guests retreated from floor to floor and room to room as the waves gutted the structure beneath them. Winds combined with the collapsing buildings to gouge out and rip through above the water level. The women were told to hold onto the roof when the building collapsed

- The year before Camille, Mississippi processed more than $23 million worth of seafood. Due to Hurricane Camille, Biloxi seafood packer Victor Mavar recounted in 1989, that he had lost a shrimp plant, an oyster plant, and a cat food plant. Two weeks after the storm, a federal agency estimated that about 20 seafood processing plants were destroyed. About a month after the storm, it was estimated that $75 million would be needed to restore Mississippi's seafood industry.

Few local fishermen lost their boats during the storm because they took their boats to the rivers and bayous and tied them to trees as they rode out the wind and rising waters. However, although many of the boats were undamaged and shrimp were plentiful, the lack of ice kept the fishermen at port for a long time.

- Walter Ross stated that, "After Camille there was plenty shrimp, but there was so much debris, everything from dead animals to toys to butane tanks in the water." "After every drag, you had to cut holes in your nets to pull out the debris."

- Departing from Keesler Air Force Base were four C-123s known as the Spraybirds. Their mission was to spray insecticide over 350,000 acres of southern Mississippi. Malathion was sprayed to eliminate flies and mosquitoes as a health and hindrance precaution. Fire ants had also survived, much to the chagrin of those badly bitten.

- Mississippi Power was able to restore electricity to Biloxi and D'Iberville by the Thursday following Camille.

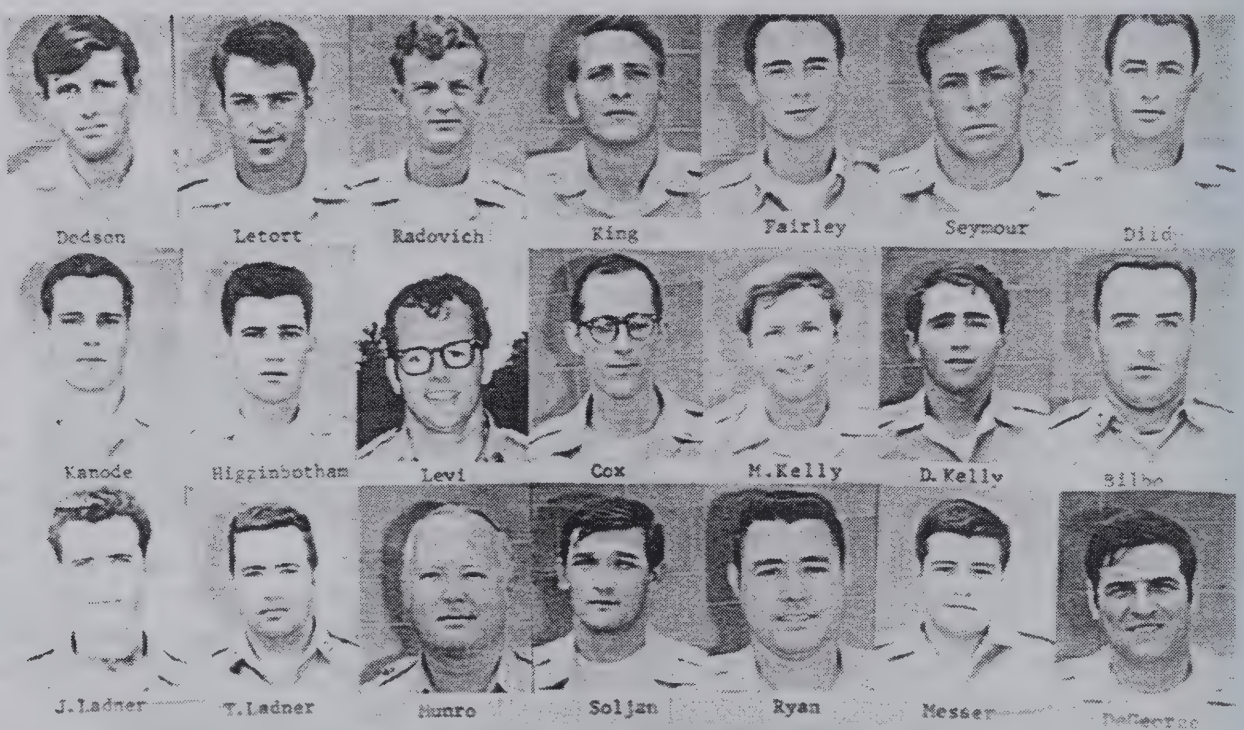
North Biloxi

Historian and Writer, Dale Greenwell, after patrolling the North Biloxi-St. Martin area, described his findings. "At least 200 homes were destroyed. Nothing was left except for the foundations," Thirteen homes were destroyed on one street that was but two-blocks-long," Greenwell explained. But, St. Martin was hardest hit with all areas having five feet of water. In north Biloxi 25 percent of the homes were destroyed, 50 percent had major damage, and the remaining 25 percent suffered minor flooding. "In almost all the areas, tidewater caused damage to furniture," he emphasized.

There is no water, no food, no medicine, and no communication in the North Biloxi area," "Houses and vessels have been washed into the streets causing temporary isolation, and the only route that is open is Highway 67. Back Bay Bridge was struck by a barge during the hurricane and is completely out of use. Popps Ferry Bridge is not open because of road damage near the bridge, and the Ocean Springs Bridge is open for emergency traffic only, " as he continued. "We are trying to contact the Civil Defense and we hope they can bring us supplies," he added.

Greenwell then told of the deaths of two people. "In one residence, four people were lasting out the hurricane, when water started flooding in. Two went to the attic, but two others refused to move. The two not going into the attic were washed away and their bodies were recovered more than a half-mile away."

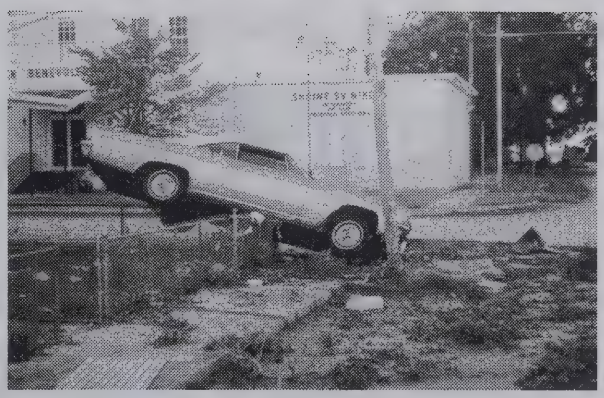
At Point Cadet, 13 Guardsmen at the Biloxi Guard Armory faced the pounding waves that was slowly tearing the walls apart. They boarded their LARC and headed north to Howard Avenue, when they hid a submerged automobile shearing away the LARC's main drive shaft – leaving them disabled and bobbing along with the waves and the winds. One of the men, Charles Dilby, dove into the debris filled water and with a rope, tied and secured the craft from being thrashed against the nearby buildings – thus saving all lives.



The above shown National Guardsmen were singled out for recognition of their heroism during the night Camille struck and for deeds that followed. They were all presented "Army Commendation Medals" and seven of them were also presented the "Soldiers Medal."

D'Iberville

The City of D'Iberville did not incorporate until 1988. During Camille and the recovery period, the area was included in Biloxi statistics.



● Charles Sullivan and a number of other National Guardsmen were assigned duty to watch the emergency and rescue equipment stored in a barn at D'Iberville. They opened the two 18-foot-high doors at each end of the barn as a precaution. When the surge began to engulf the building, Sullivan was sitting on the ground, resting against the side of the barn, which was reinforced with concrete blocks. Then a small wave swept into the barn – the water quickly flooded the barn and the guardsmen scrambled. One had his rifle caught beneath the water and as he attempted to disengage it he screamed out, "We've got a shark in here."

The LARC operator retorted, "It's a Volkswagen! You've got yhour hand on the fender!

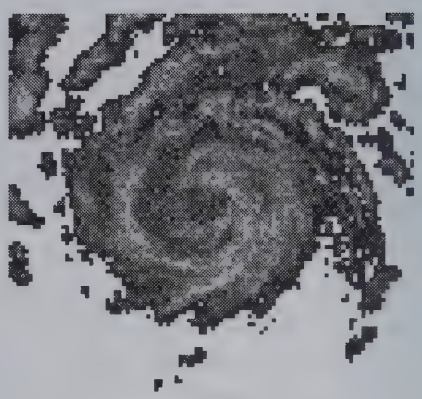
Sullivan climbed the ladder of an amphibious truck and saw behind him a 10-foot wave coming slowly up to the back door. As the water rose – the truck began to float. To keep it from turning over the guardsmen tied it to the steel ceiling beams. The winds were screaming and airborne debris slammed against the metal barn all night until daybreak.

● When a log jammed the propeller of the LARC carrying 35 refugees, Brill Fairley jumped overboard and after remaining under water for nearly 10 minutes was given up for dead. He had found an air-pocket beneath the craft which allowed him refuge while disengaging the obstruction.

● An insurance claims investigator said late Tuesday morning that the North Biloxi area is in desperate need of food, water, and clothing.

Reported deaths in the Biloxi area numbered 18.

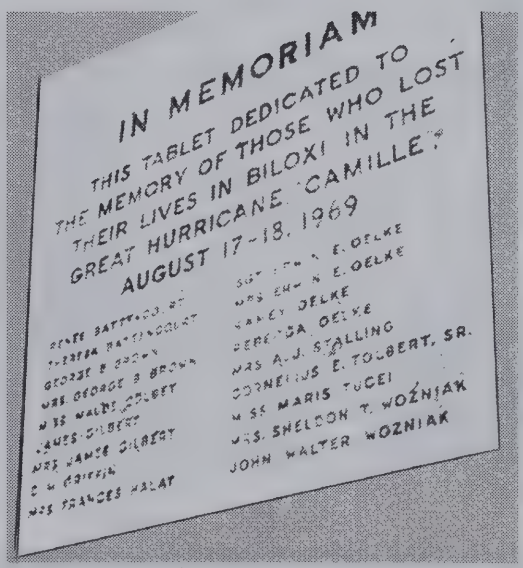
Rene L. Bettencourt	Sgt. Erwin Oelke
Theresa Bettencourt	Evelyn Oelke
George B. Brown	Rebecca Oelke
Florence Brown	Ramey Oelke
Miss Maude Colbert	Mrs. A. J. Stalling
James J. Gilbert	Cornelius E. Talbert
Marie Joullian Gilbert	Miss M. S. Tucei
D. L. Griffin	John Walter Wozniak
Frances G. Halat	Sheldon T. Wozniak



The above names include Biloxi and North Biloxi, or D'Iberville, as it is known today – since its official incorporation as a City in 1988.

The Biloxi Memorial Plaque

This Biloxi Plaque is located at the foot of Main Street in the Small Craft Harbor imbedded in cement at the base of the Flag Pole.



A Bronze Plaque memorialized the 18 Biloxi area deaths.

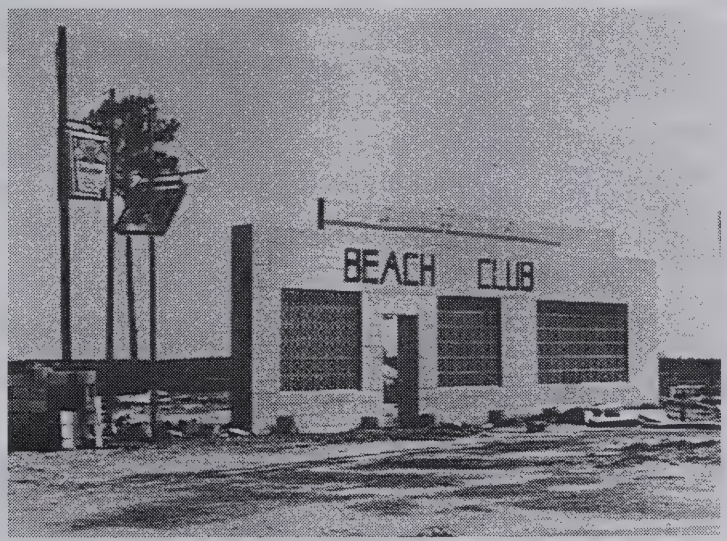
Jackson County

Ocean Springs was hit with tides and winds early Monday morning as bad as neighboring Biloxi, but deemed not to be as badly affected. There was electricity in parts of the town, the city water system was working and there was some telephone service. "We'll be out of the woods tomorrow," said Glenn Young, the city's Civil Defense director. But while Young and Mayor D.L. Connor were talking, they were considering the city being placed under martial law, and agreed to partial martial law. "The only difference between Biloxi and this area is ours is spotty," Mayor Connor said. There were some people in the beach area and other low areas in the city as well as neighboring Gulf Hills where property loss ran high.

Ocean Springs Business District

Tuesday afternoon, the shelters had emptied and the mayor said those residents who had lost their homes were staying with friends or relatives. Besides the city's junior high school, the First Baptist, First Methodist and St. Alphonsus Catholic Churches were used as shelters. "The churches have taken care of a lot of the needs," Mayor Connor said.

The only death known in the city Tuesday afternoon was that of Catholic Priest, the Rev. G. O'Neil, OSB, whose death had been reported earlier. There were two bodies recovered in the St. Martin area in Jackson County, the Civil Defense director further stated. Two of the sections of the town which were particularly hit hard were the Sea Point area near the mouth of FortBayou and the beach area which is the area where Iberville Arden Apartments, the largest apartment complex in town, were destroyed.



Only the facade remains in Pascagoula

● The homes in Sea Point, exclusive residential area, were demolished or extensively damaged, Mayor Connor stated. Residents were assisting city crews in clearing the streets of debris and by Tuesday afternoon they were reported about 85 percent cleared.

The National Guard LARCs were used throughout the coastal areas carrying nearly 2,000 residents to safety shelters.

● 36-year-old John Switzer's home was just two years old. He was watching the water outside creep up slowly. When the waster reached over the top of his four-foot fence bordering a shallow draw in his back yard, he exclaimed, "Let's Go!"

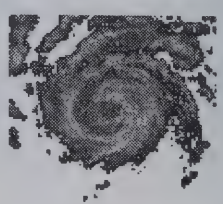
He led his wife and two boys into the car and drove on top the side walks until reaching the bank office downtown Ocean Springs where he worked. There, they rode out the storm in safety. He recalled that the wind was screaming like a "banshee."

The house was but a shambles. For the next several years, on August 17th, he held a "slab party" much like other Coastians had "Driveway Parties"as a reminder of the Night of Camille. In commiseration together, "We would pull up a box or piece of furniture, pop open cans of Vienna Sausage, down some crackers, . . . followed by a draw on a beer or choke down a whiskey."

National Guard troops checking the beach areas.

● In Ocean Springs, a gun fight took place when armed looters shot at approaching Guardsmen. With the looting that took place in the Gulf Hills area, Guard commanders who deployed their soldiers gave them orders to shoot when necessary.

● Several years later, former Jackson County Civil Defense director Hank Turk remarked, "You can now say we've recovered from Camille," "It's getting hard to find evidence any more."



The Jackson County death count was reported as four.
However, one was also counted and named in Biloxi.

***Miss Jessie Goff *Emmet Robinson, Sr. *Father Gilbert O'Neill**

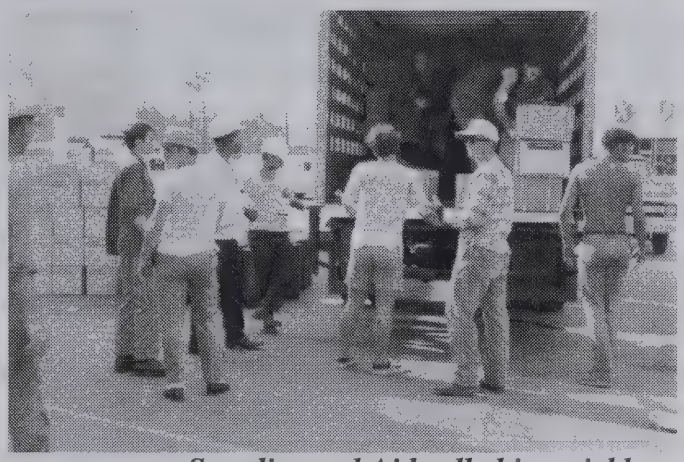
The Relief Effort

The aftermath of Camille welled with compassion from every corner of the United States. Stories have abounded regarding the sacrifice and endurance suffered by the nearly 240,000 Mississippi coast residents. Thousands of good Samaritans and nameless strangers sent donations, food, clothing, and their prayers. All combined, the efforts totaled millions of dollars in cash, supplies, and services with no expected return. In addition, there were hundreds of volunteer hours that were given.

Goodwill came from as far as California and as near as Louisiana. Baton Rouge Mayor Woody Dumas said, *"Our people feel they can't do too much – A few miles difference in the storm's path, and it'd be us needing help."*

Many local Coast businesses handed out free food, rather than let it spoil.

Mississippi's Gov. John Bell Williams thankfully stated, ***"People from all over the United States have opened their hearts to us."***



Supplies and Aid rolled in quickly.

Truckloads of Supplies

In the beginning, most communities sent clothing, but as Coast warehouses became stacked ceiling-high, they switched to essentials. Tons and tons of goods and supplies poured into the Coast area. The national response was unbelievable. Industry, military bases, government and private relief agencies moved quickly in the wake of the hemisphere's most devastating hurricane.

Friend helped friend, Neighbor helped neighbor, Stranger helped stranger.

- Baton Rouge's first 20 truckloads of food, medicine and supplies arrived within less than 12 hours after Camille's winds had subsided – eventually sending 100 truckloads as their gift to the Coast.
- Myrtle Beach, S.C., raised $8,000, remembering all too well the devastation they'd experienced with Hurricane Hazel in 1954.

Californians James Eide and Walter Quave drove all the way from Santa Clara with a load of food and gas.

- Enterprise, Alabama sent four truckloads.
- Pensacola, Florida sent 17 vans filled useful commodities such as cleaning supplies, safety matches and dishes.
- Spurred on by former Coast resident, Catherine Gieger, Fort Wayne, Indiana sent a truck filled with clothing. Gieger had planned to send a small box, so she sent a note to her new neighbors to see if they'd like to contribute. The media picked up the story, and donations poured in.
- Mississippi dairies filled milk cartons with much needed water.
- Coca Cola Bottling of New Orleans sent bottles of fresh water.
- Illinois Central Railroad sent water tanks and Pullman sleepers to house rescue workers.
- Bristol Myers Laboratories in New York flew in $10,000 worth of prescription drugs.
- Wyeth Labs in Georgia sent in 600 cases of baby food.
- Eight vitally needed power generators were donated by the Honda Co. of Virginia.
- The Purina Feed Co. sent a ton of pet food.
- Bay Town, Texas sent a Cadillac ambulance to Pass Christian.
- The Jefferson Parish Doll & Toy Fund sent hundreds of toys to Coast children for an early Christmas.
- A $500 check from Dyersburg, Tennessee was signed – Santa Claus.
- The Mennonite Disaster Service had rushed down, first to help clean up, then they remained to help repair and rebuild the communities.
- The Salvation Army and the American Red Cross forever endeared themselves to the Coast by sending hundreds of relief workers, supplying thousands of meals and spending millions of dollars.
- Then there are the federal and state agencies who distributed millions of dollars; sometimes in the form of loans, but also as donations.

"I gain more than the person I'm helping," admitted Myron Schultz, a Mennonite farmer from Montana.

The Gulfport/Biloxi Airport

Following Camille the Airport became the major nerve center of the recovery operation, and one of the busiest airports its size in the world. Trains were interrupted because of destroyed bridges, the highways and roads were closed due to fallen trees, flooding, and downed power lines. — And, the ports were closed eliminating boat traffic.

On August 21, 1969, Tower Control Chief Henry reported the busiest day the field had ever recorded. The previous high was on August 19th, when 1,030 landings occurred, bringing personnel, medical supplies, and advance parties seeking out the most pressing needs for the area.

Harrison County prisoners were assigned to relief work unloading supplies, moving food, and performing emergency clean-up.

Military and Government Efforts

From military bases everywhere came laborers, experts, equipment, even dogs to help locate bodies. Those military personnel who were already stationed here treated the Coast as if the disaster had occurred in their own hometown.

National Guardsmen from all over Mississippi and from many other states helped in search, cleanup, and martial law.

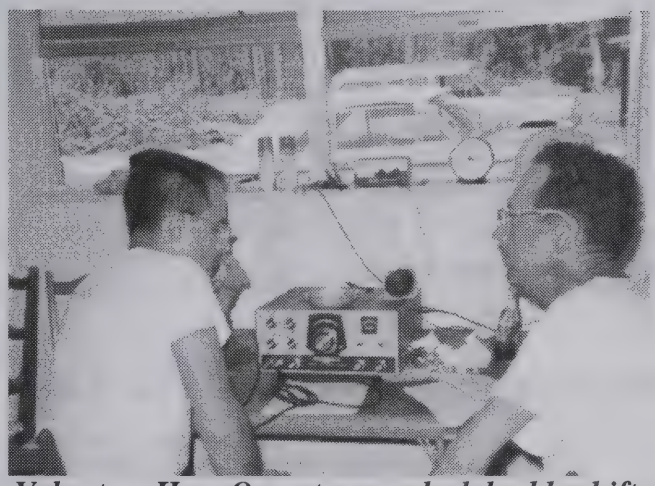
Three days after the storm, the Georgia Guard had already flown 14 missions, depositing more than 400,000 pounds of food at Keesler Air Force Base.

Keesler Air Force Base personnel set up a communication system to let outsiders know that their Coast relatives had survived.

Six ham radio operators from Pensacola came to deliver messages, then set up operations at the Seabee Center in Gulfport for outgoing messages.

From Ft. Benning, Georgia, was sent a 700-man Engineer Battalion with a medical team, water purification experts, and all kinds of light and heavy equipment including bulldozers.

Volunteer policemen from Alabama, New Orleans and upstate Mississippi helped the local force keep looting at a minimum.

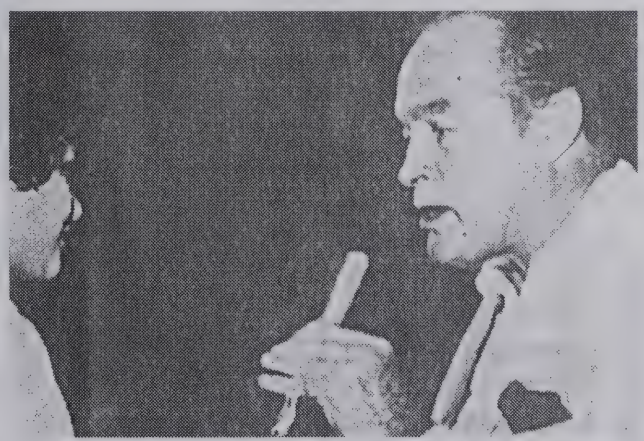


Volunteer Ham Operators worked double shifts during the first weeks.

U.S. Army helicopter pilots were assigned to search the remote piney woods areas. They found a family of 12 persons near Wiggins in Stone County who had gone without water and food for two days. Helicopters were also used to make food drops to more than 130 isolated refugees in a 3-day period.

We Care

The biggest monetary gift came from the "We Care" telethon that had attracted the likes of comedian Bob Hope, singer Eddie Arnold, the Gold Diggers and Bobby Goldsboro. Members of the New Orleans Saints foot ball team also participated.



Bob Hope emcees the We Care Telethon

The results of that hot August day at the Coliseum in Jackson, raised $1.3 million that was distributed to Coast disaster centers..

While on the air, a contribution of a handful of nickels by a child, grew into a $100,000 windfall from the business community of St. Petersburg, Florida.

One of the telephone calls answered by Bob Hope during the *"We Care Telethon"* was from President Richard Nixon who congratulated the effort by stating, ***"I think what is done through this kind of activity, where people all through the country volunteer not only their money, but also their help – this is really the true American spirit.". "With this kind of heart, America is going to do all right in the years ahead."***

The Gold Diggers

SBA Loans helped to rebuild the Coast

Hurricane Camille destroyed much of the coast in a 9-hour period, but it took many years for Municipal and County governments to repay state loans

Following August 1969, by July 21, 1970, the U.S. Small Business Administration had granted 10,000 loans with an aggregate value of $100 million. In many cases, during the 30^{1st} anniversary of the year 2000, – those who made 30-year loans will make their final payment.

Nixon flying to the Coast.

Recovery

After the first 10 years, the Coast had become well on its way to normalcy. With the passage of the next ten years, the Coast had climbed out of the doldrums and dilemma – in spite of having lost most of its New Orleans tourists to such Florida coast locations as Destin – which has exploded from its 600 population base in 1970.

Thirty years after Camille, there are but few signs that Hurricane Camille ever existed.

> ***"Lingering scars . . . will serve to remind us of the warmth and humanity of the people of these United States."***

In a 1969 editorial, the late Robert McHugh, executive editor of *The Daily Herald,* thanked Coast residents and the people across the nation for the benevolent support and aid that had contributed to the Coast's rebuilding efforts. "The scars of Hurricane Camille will linger on the Gulf Coast for many years," he wrote. McHugh went on to remark, however, that,"We hope that a few of them remain forever. For they will serve to remind us of the warmth and humanity of the people of these United States."

Although with the passing of time there are fewer and fewer visible reminders - a tugboat on dry land, a gaping cut through Ship Island, a few "steps to nowhere" - all are 30-year-old signs of the Great Storm.

Some of the significant sites – before and after – are:

- A Jitney Supermarket marks the spot where the renown "hurricane party" was purportedly held at the Richelieu Apartments in Pass Christian. No longer a site to remind local citizens that the eight who died there refused to heed the requests for them to evacuate to local shelters.
- A BP convenience store sits on the spot where once stood the Biloxi Lighthouse keeper's home that until 1969, housed the Biloxi Chamber of Commerce.
- A brick archway at the former offices of *Mavar Shrimp and Oyster Co. Ltd.* signaled a reminder of Biloxi's Point Cadet devastated seafood industry. Through the years, the archway was trapped by wild vines and bushes – it has since, been demolished and replaced by a Casino.

A Symposium – Camille after Thirty Years

> ***Today's Mississippi Gulf Coast population of 420,000-plus is 30 percent greater than in 1969,***

To mark the 30th anniversary of Hurricane Camille, the University of New Orleans presented a two-day symposium on the impact of Camille.

The symposium reviewed what happened during Camille, its consequences, and lessons learned and lost. Other points examined

were: how major coastal storms can be an instrument of change along the shores of the United States; damage to social and economic infrastructure; and the potential impact of a Category 5 hurricane on present-day coastal areas.

Since Camille, a mandatory evacuation law was passed requiring those in danger zones to leave. Also, the Mississippi Gaming Commission requires that every casino on the coast be built to withstand a Category 4 hurricane -- a storm with sustained winds of 131-155 mph. The commission also mandates that each casino have an evacuation plan.

Today's Mississippi Gulf Coast population of 420,000-plus is 30 percent greater than in 1969, but state officials say the region hasn't significantly upgraded its evacuation routes during the past three decades. The Federal Emergency Management Agency (FEMA) says it would take longer to evacuate the area than it did when Camille struck on August 17, 1969. — And that's not taking into consideration the 500,000 or so visitors who make the pilgrimage to the casinos each week.

The Federal Emergency Management Agency (FEMA) says it would take longer to evacuate the area than it did when Camille struck on August 17, 1969.

Preparedness 2000

In June 2000, at Gulfport, principles representing the Mississippi Emergency Management Agency, the State Health Department, Coast Civil Defense offices, and the local Military, conducted a Hurricane Evacuation Workshop for Health-care providers operating on the Gulf Coast and inland area counties.

The intended purpose was to formalize plans for evacuation and sheltering of hospitalized and home bound patients of special needs. It was estimated that as many as 40,000 people with medical problems could need special shelters or assistance in evacuating the Coast if faced by a Category 4 or 5 hurricane.

Regarding people with *"special needs,"* Steve Delahousey, Director of (AMR) American Medical Response , stated that, "before Hurricane Georges (1998 – a Category 2 hurricane), we began gathering data on the actual number of people we would need to evacuate."

"Chances are, Delahousey said, "only a small percentage of the estimated 40,000 would need help from agencies – many, we hope, have family members or someone else to help them."

"We don't have enough special-needs shelters, and we can't send all our ambulances out of town during evacuation, so we need a plan for evacuation!, " he exclaimed.

"We don't have enough special-needs shelters, and we can't send all our ambulances out of town during evacuation, so we need a plan for evacuation!, " he exclaimed.

Camille, She won the Battle – *We Won the War!*

Flags, Slogans, Signs, Banners, Bumper stickers – and more – were displayed and posted everywhere as a prevailing indication of the "Come Back" spirit that became familiar along the Coast. There was spirit, heart, compassion, and gratitude.

With the publication of the photograph of a West Beach home in Pass Christian displaying Old Glory on a bent pole – it became a reminder to Coastians of the courage displayed at the taking of Iwo Jima. Because of the prevalent and spontaneous display of American Flags throughout the Coast, the *Daily Herald* ordered and received a shipment of 600 flags and staffs. These were made available for $1 each.

The Flag continued "waving on" from its bent pole at left.

During the recovery period of that first year, the *Daily Herald* recommended that an annual observance of a ***"Gulf Coast Flag Day"*** should continue to coincide with future anniversary dates of "Camille" --- August 17th.. It was considered that memorialized observances would be a reminder for Coastians to become Hurricane Wise and to become better prepared through awareness programs.

Anniversaries Memorialized

The stories of Camille's heroes and victims have been told and retold, some in print, and some more privately around family tables.

As anniversaries pass by, the more than 74,000 families who suffered losses – from damaged roofs to entire houses swept away. In particular, those stories that are retold each Hurricane season – as the Coast passes the Camille anniversary milestones of - the first, the fifth, the 10th, the 20th, the 25th, the 30th, ...

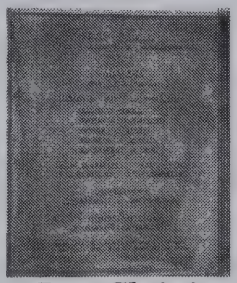
The First Anniversary

In observance of the first Anniversary after Camille, churches responded with memorial services – church bells peeled out calling to their congregations – delivering haunting sounds with a poignant message of joy and sorrow. The churchgoers celebrated the sorrow for those who had lost their lives – and the joy for having sustained the necessary strength and pride to endure and to meet the challenge of Recovery.
— And, gratitude for those who sacrificed and helped during time of need.

Reminders in Stone

Each Anniversary brings Reflection – Strength

The first Memorial Observance was at Pass Christian on May 2, 1971, with the dedication of its new City Hall building. The Hall was memorialized in remembrance of the victims of Hurricane Camille. At that time the local "Beacon" newspaper reported 63 Pass Christianians as having lost their lives due to the storm with yet several bodies missing. Adding to the count was one heart attack victim at a hurricane shelter, and another, a terminally ill nursing home patient, had been evacuated to Meridian. In addition, there were four who were killed just north of Pass Christian at Bayou Portage. Lt. Governor Charles Sullivan was the speaker for the occasion.



Pass Christian Bronze Plaque.

Pass Christian City Hall was dedicated in 1971, being dedicated to the Memory of the deceased victims who lost their lives in Hurricane Camille.

The Bronze Plaque posted on the front entrance wall of City Hall cites: ***"Dedicated in Memory of those citizens who lost their lives in Hurricane Camille – 1969."***

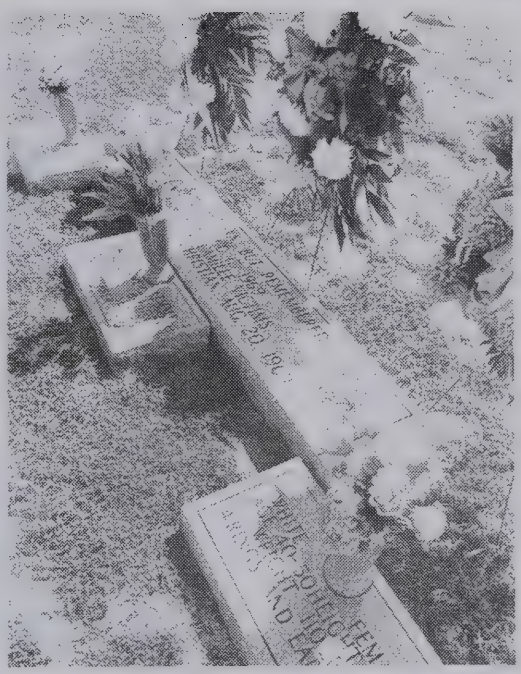
1972

Waveland is the only community with an Historic Marker etched in gratuitous terms regarding the City's arduous recovery during the months that followed. In May, 1972, the marker was dedicated with gratitude to its citizens and for the aid provided by government agencies, organizations, churches, and individuals. The *"Survivors' Marker"* fronts the Waveland City Hall on Coleman Avenue

FROM THE PEOPLE OF WAVELAND
In appreciation and gratitude to all who gave of their time, energy, and money to help us recover from Hurricane Camille
On August 17, 1969 our city was devastated, but those who cared came to her rescue

1979

In 1979, preparing for the 10th Anniversary of Hurricane Camille, Harrison County Civil Defense Director Wade Guice initiated a fund-raising campaign asking Coastians to donate 25¢ to pay for the cost of headstones for the three unidentified victims, Faith, Hope, and Charity. When the three women were first buried in 1969, along with many others at Evergreen Cemetery in Gulfport, it was assumed that relatives would step forward to claim the bodies. However, with the passage of time and the lack of concrete queries, Guice decided to raise funds for headstones. On hearing about the project, Ed Laird of Foxworth, MS stepped up and donated the present grave stone and individual grave markers with the inscriptions that describes each of the three women at the time their bodies were found in Pass Christian.



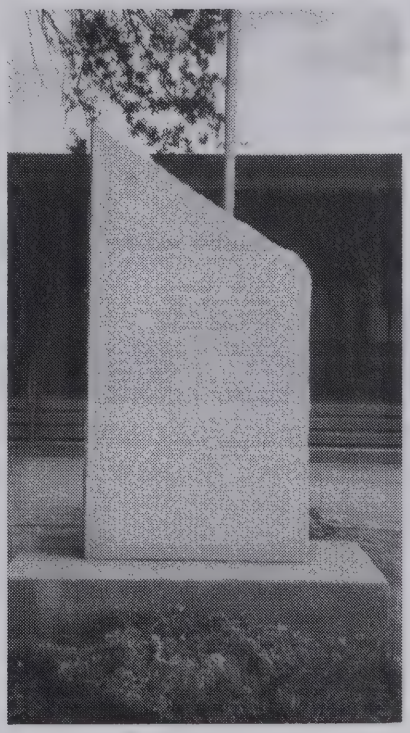
The monies that were raised were deposited in a Trust Fund for flowers to be placed annually at the gravesite.

Until his death in 1996, Wade Guice ceremoniously placed flowers at the cemetery.

Linda Rouse, the current Harrison County Civil Defense Director, has assured the continuance of a quiet ceremony and the placing of the graveside flowers.

1989

Twenty years after Camille, on August 17, 1989, Gulfport citizens raised the funds to dedicate their monument which reads, ***"In memory of these Gulfport citizens who lost their lives in the fury of Hurricane Camille."*** The monument is planted in front of the West Side Senior Citizens Center on Hwy 90 with a listing of 14 names, two of which are also accounted for as residents of Pass Christian.

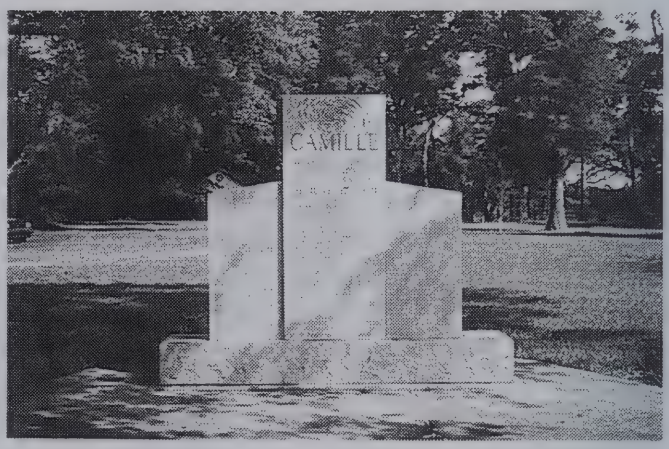


When the granite stone was dedicated, Gulfport Councilman Richard Rose stated, "It's important to remind those future generations of what can happen, and I don't want to see it happen again!" Councilman Rose, who helped raise the funds for the memorial, lost his father, Fred V. Rose, to Camille.

1993

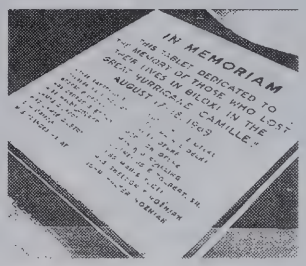
On November 25th, 1993, there was a second physical monument placed by the citizens of Pass Christian in the dedication of a 60-sq-foot granite memorial.

Inspired by VFW Auxiliary member, Inez Bourdin, and research that was pursued by Billy Bourdin, the local VFW chapter led the funding campaign. The memorial serves as a reminder and is a Camille anniversary rallying place where American flags are abundantly displayed and memorials remember the victims who died.



The Biloxi Plaque

Cemented at the base of the Flag pole in the Small Craft Harbor in Biloxi is the Memorial Plaque for the death victims of that area. 18 names are listed.



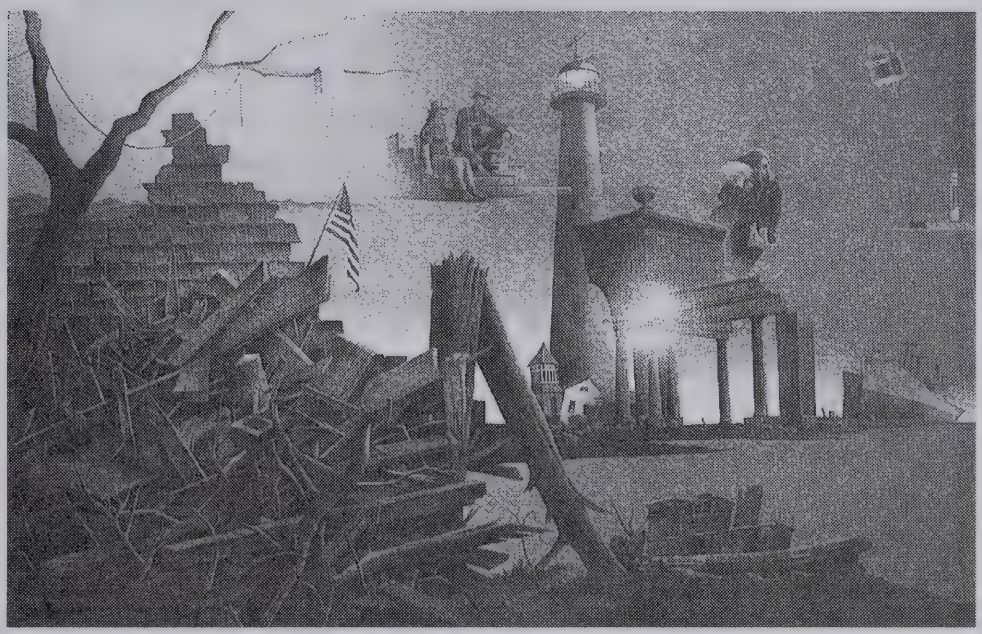
A New Memorial in the Making

On August 17th, 1999, groundbreaking exercises were conducted at the Episcopal Church of the Redeemer in Biloxi. A Memorial Wall is planned and will be erected in the Garden of Remembrance.

The Memorial is budgeted at $100,000 and will include the names of all of those who died in the Mississippi Gulf Coast counties of Hancock, Harrison, and Jackson. The effort was initiated by Julia Guice, wife of Wade Guice. Each were heading their respective offices of Civil Defense during the devastation by Hurricane Camille. Julia Guice, headed the City of Biloxi, while Wade Guice was in charge of Harrison County.

Church of the Redeemer was almost totally destroyed by Camille.

The Rebirth Mural



Located in the Gulfport Civil Defense office is a 10-by-22-foot mural created by Charles Swan which symbolizes the rebirth of the Gulf Coast following the devastations by Hurricane Camille.

Reminders in Video

That's my house!

The screaming woman is one of the most powerful images caught on film and displayed on TV in the aftermath of Hurricane Camille on August 17, 1969.

On viewing the Documentary, the woman initially appears calm and controlled as she walked through her rubble strewn neighborhood in Buras, LA. At first she seemed somewhat puzzled by not finding her house.

"It's bound to be in here somewhere – because all these others are the houses that came from my vicinity" ... but, without warning, she broke into shrieking sobs and screamed out "THAT'S MY HOUSE. . ." as she pointed across the street from where it once stood.

- Another documentary was prepared for the 30th Anniversary as there will hopefully be more produced in the future.

Reminders in Print
Most are Collector's Items

Story books, picture books, and pamphlets about Camille immediately went to print during the first years after the 1969 hurricane. They became icons that were sold in book store, souvenir shops, and newsstands throughout the Coast. Each year, special "Camille" inserts can be found in the local newspapers of the Sun Herald and the Sea Coast Echo.

A number of these can be found in the Hancock and Harrison County Library systems.

A partial list of hurricane publications that are usually found in the Reference section of local libraries are:

Hurricane Camille: Chauncey T. Hinman, Gulfport, 1969.
Camille, A hurricane: Graphic Press, Biloxi, 1969.
The Story of Hurricane Camille: Gulf Publishing Co., Gulfport, 1969.
Miss Camille 1969: The devastating female: Fennell's Coast Litho Printing Co., Inc., Long Beach.
Camille and the Gulf Coast: Dennis E. Holston Photography, Gulfport.
Camille . . . She was no lady: Dav-Mac Publishing Company, Batesville, Ark., 1969.
Camille: A picture story of the most devastating hurricane ever to hit the United States Mainland: Loma Enterprises, Biloxi.
Camille . . . One Year Later: Dave-Mac Publishing Company, Batesville, Ark., 1970.
The Story of Camille: Governor's Forest Disaster Salvage Council: Jackson, 1970.
Hurricanes of the Mississippi Gulf Coast: by Charles L. Sullivan, published by Gulf Publishing Co., Gulfport, 1987.
Camille: The flashback 1969: Jimmie Bell, Bell's Letters Magazine, Gulfport, 1989.

A partial list of hurricane publications that are usually found in the Reference section of local libraries.

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All About Camille: Dan Ellis, 2000

Poetic Revelations

Their spirits never will.

Camille

by Jessie Heitzmann,
Pass Christian

Storm clouds gather in the distant sky,
Rolling swiftly toward the shore.
Winds rise up to stoke the waves
And relentless rain begins to pour.

Thunder now rolls o'er the land,
As lightning streaks the sky.
Seagulls hasten to their nests
As the storm grows nigh.

Rapacious winds impel each wave
To pound upon the sand.
The boiling sea begins to rise
And threatens to engulf the land.

Nature's rage now manifest
Against all who cross her path.
No mercy does she render
Till all have felt her wrath.

How peaceful comes the dawn!
How deceptively serene!
How beautiful the sunrise
On a heart-rending scene!

A town demolished, torn apart,
Crushed as if by giant hand.
Precious lives now are lost,
Shattered dreams upon the sand.

But brave hearts band together,
Though they're grieving still.
Though all around has crumbled,

Mid Fallen Trees

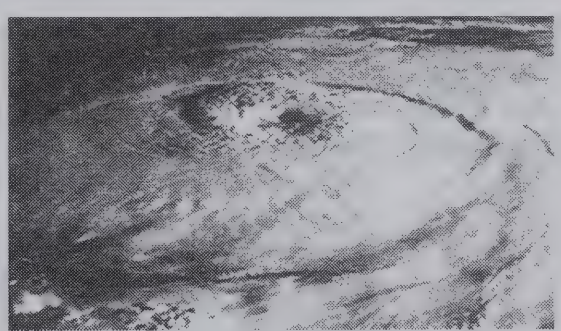
by Jimmie Bell,
Gulfport

Not till the back of night was finally broken
Did we know Camille had brought us to our knees!
Our past was now beyond our easy reach –
Our way of life a ghost 'mid fallen trees.

Word Pictures

by Jimmie Bell,
Gulfport

Rooftops Biting the dust . . .
Curious airplanes form that other world too good to land . . .
The Coast swallowed up by its own framework . . .
US 90, its south lane in a splint . . .
Live Oak roots surrendering to God . . .
Automobiles shorn of their owners . . .
Porches leaning heavily on their imagination . . .
Houses turning their faces away form the storm . . .
Carports at half-mast . . .
Church walls cracked open to let faith in . . .
The unfound dead, patiently awaiting their rescuers



Camille – The Greatest Storm

by Frank "Twig" Branch
Long Beach (August 26th, 1969)

Clear the low-lands came the warning – Head for the higher ground,
There's a big storm a brewing – And she is Mississippi bound.
Take all the precautions – Make your preparations for real,
You have little time to spare before you meet Camille.

Oh! We're not afraid of her – We've been through a storm before,
Many the times we've faced danger – Here on the Golden Shore.
Just as in "forty-seven" – When we rode out that big blow,
This one sounds big and loud – But, shortly, she too will go.

But who knows the wrath of a Woman – A woman named Camille,
Who's fickle course and pathway – Left little chance for appeal.
She zeroed-in on the Gold Gulf Coast – And with her eye she gave a wink,
That unleashed pent-up fury – More powerful than you could think.

She raced ashore that evening with tornadic winds and killer tide,
She hit, she bit, she kicked, she blew, she pushed everything aside.
More contrary now and angrier – she battered and raked the beach,
Not ready to move on until – she had marked everything within her reach.

Leave behind her marks she did – Nothing is still the same,
History will call her the greatest storm, it will record her name.
It will tell the story of death, destruction, loss of millions and the shame,
Of a people not fully prepared to compete in that kind of game.

Camille has gone now and already we have found,
New friends, old friends, kind words, good deeds, and helping hands abound.
She has rekindled a spirit that says, "Help your fellow man!"
She has knocked us to our knees, but, We shall rise again!

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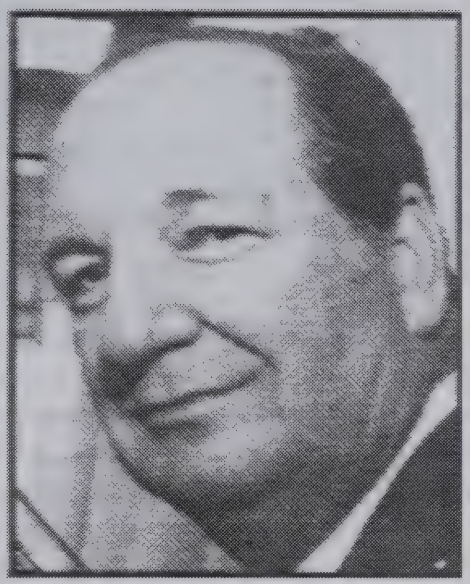
A Tribute to Wade Guice

by Jimmie Bell



The Coast of Mississippi has borne the brunt of major hurricanes from time immemorial – year after year, the same old haunts, the same old fears of inundated real estate, wasted millions of dollars and loss of life and limb – until –

A funny thing happened on Camille's way to the Coast in August, 1969. The killer hurricanes – those "storms of the century" as they were labeled – finally, after eons of tragedy and heartbreak, suddenly met their match.

His name was Wade Guice.

Wade bore none of the ferocity of a storm, smiled more than he frowned – and remained a rather calm, practical individual who meant no harm to anyone. But with his heart, his soul – Wade Guice responded to Camille and steeled himself with his very own storm that was within.

After he surveyed the 1969 devastation and figured out why so many people died, he regrouped his thoughts – and he developed a plan which he found necessary to shout to the world.

On the county level, Wade had succeeded his wife, Julia, although in spirit, both man and wife devoted their lives to learning all they could about hurricanes and spreading the news.

As early as 1957, Julia Guice was a Civil Defense volunteer in Biloxi where she became the city's Planning and Training Director. By 1960, she was the first person in Mississippi to be certified to receive federal funds to establish a more aggressive unit. This was just in time for Hurricane Ethel, a 150-mph storm that occurred on September 14th, 1960.

Two days later, her first professional assignment was Harrison County Civil Defense Director.

The next year, in 1961, Mayor Daniel Guice, Wade's cousin, prevailed upon her to accept the position of Biloxi's Civil Defense Director, which she did and Wade became the Harrison County Director.

In accepting the position of Harrison County CD director, Wade learned that talking was no better then whispering. He had developed a message, but it had to be loud and clear or no one would hear.

When more than 100 died in Mississippi that August of 1969, and nearly 100 more died in Virginia in the same storm, he realized that too many had not pondered the simple words, "Get out while you can!" So he began saving the hurricane-prone world person by person. He had been 34 years old when he began his campaign in earnest; when he died at 69 he had spent everyday of his 35-year tenure telling the world how it could save all those lives.

Too many had not pondered his simple words, "Get out while you can!"

I was at first puzzled by something I saw two mornings after Camille's visit when I went to a press conference in Wade's office in the old Harrison County Health Department on 17th Street in Gulfport. He had room for only four chairs for the media as he began reporting on the extent of the damage and what we could expect next in the recovery. And all four chairs were occupied by network and out-of-state news reporters. I was a reporter for *The Daily Herald* and thought that surely whatever Wade had to say was of far more interest to the readers of our local newspaper than to the national press.

But as fellow newsman Richard Glaczier and I hung over the ledge of the first-floor windows, covering the meeting from outside looking in, I realized why Wade Guice wanted the national media to pay attention. The word he was sharing was "Tell the people to leave a hurricane-prone area in plenty of time and they will never become a personal victim of the tragedy you see here today." I will say this for the out-of-state reporters. Two of them put down their comic books and began listening . . . Wade was not worried about Richard and me – he knew we already had his best interests at heart and would share with our readers those truly life-saving words he was imparting. A few days later, the "big media" were gone and we got our chairs back.

"Tell the people to leave a hurricane-prone area in plenty of time and they will never become a personal victim of the tragedy you see here today."

It was in those daily briefings in the first week after Camille that I began seeing that Wade was unfolding a message that concerned the whole world – not just Mississippi. I did not see it at the time, but he had set his jaw and his mind to changing the way the world looks at hurricanes and how it may greatly expand the list of anticipated survivors – no matter what the community or what the storm.

As the storms came and the years passed, people who respected life began listening. He became quoted more and more from his Camille experiences. And the world took note.

But Wade began suspecting (and it became true) that in life after Camille, there would emerge at least a handful of major hurricanes, and he had messages to convey before each of them. It was akin to dealing with a wayward family whom Wade Guice knew meant trouble but trouble that could be avoided. Remember the chummy and misleading names they gave them: Bob, Frederic, Danny, Elena, Juan, and Kate?

He was the perfect leader for taking the people out of the trouble. When the last hurricane-hunting plane to brave Camille limped to Texas with one engine dead and the other failing, the Hurricane Center in Miami warned the Coast: "Never before has a populated area been threatened by a storm as dangerous as Camille."

With that reporting, as Guice and his staff listened, they renewed their pleas to Coastians to evacuate even the areas that were not considered low-lying. This was one of the fist enduring warnings that Guice would use in making new storm-preparations.

He always had faith in his own words. He took his heart-rending message to the civic clubs of the Coast. Business owners began listening. Schools began listening. Service agencies began listening. "We lost 132 precious lives in one storm," he would say. "I consider each of them a personal failure. And the ghosts of my failures cry out to me every time I drive down the beach. That's a heavy burden, indeed . . . I hope no one in the whole world has to go through another Hurricane Camille."

And then he would liken Camille to Hiroshima: "No single act of destruction in the history of the known world was so devastating – no storm, no tidal wave, no earthquake, not even the atomic bombing of Hiroshima, which took 60,000 lives and had a total destruction of about three square miles. The total destruction area in Harrison County alone was more than 20 times that – or 68 square miles."

By then, his concern led to new directions. At one time he estimated that it would take 12 hours for Civil Defense and local law enforcement officers to chase residents and tourists off the Coast – and warned that traffic would be a nightmare.

"We've got more traffic with the same roads to put them on, and more people."

By 1994, Guice said that as far as evacuation of the Coast was concerned, "We've got more traffic with the same roads to put them on, and more people." He often expressed his hope that he could get Mississippi 15 opened all the way from Biloxi to Tennessee, but prophesied, "Its not going to happen in my lifetime."

During his 35 years as Civil Defense director, Guice found his enthusiasm and his message were frequently drawing him and Harrison County into the national and international spotlight. His message was definitely being heard – board up, stockpile and gas up – then run for your lives but leave early – it works!

Board up, stockpile, and gas up – then run for your lives but leave early – it works!

Guice was always proud of the fact that 95 percent of Harrison Countians responded to advance warnings. The figure was based on a post-hurricane survey made by the University of Ohio, which was one of the first out of state entities to believe in the Guice message. Commented, Guice, "That leaves five percent who did not respond. All of the dead," he said, "are among that five percent, and all were drowning victims killed by the tidal effects."

"This confirms," he said, "that there is no excuse for losing a single human life in a hurricane, especially with the sophisticated warning information we now have." And that was 31 years ago – before satellite relays and Doppler Weather systems.

The Ohio Study prompted him to survey other areas of the world that were inundated by typhoons or hurricanes – and he said that almost without exception, deaths in those areas also occurred because of the tidal effects.

His goal was to make the evacuation system a matter of 100 percent response, but knowing human nature as he did, he said he could never really expect more than 99 percent of the people to take the message to heart. He always felt that the really frightening thing about preparing for hurricanes today was the fact that relatively few people living today remember Camille, and that thousands of newcomers perhaps never heard of it.

Consequently, the message must go to them with the arrival of every hurricane season. As early as the mid-70s, Guice asked hundreds of Coast residents if they would heed the warning to leave if an impending hurricane threatened their Coast and was pleasantly surprised to find that nearly all of them said indeed they would leave – and would actually leave extra early in order to avoid the slow and maddening trek to safety.

Julia Guice lays roses at the graves of Faith, Hope, and Charity – and continues the work started by her and her husband Wade, in promoting hurricane preparedness and awareness of the dangers of hurricanes.

Wade Guice was born August 1, 1927 – his month coinciding with a most popular month for big storms. As a lifetime resident of the Coast, he lived in Long Beach, Gulfport and Biloxi. At 16, he joined the Merchant Marines serving during World War II. He returned from the service and graduated at Biloxi High in 1947.

He and wife, Julia, became the parents of three children, Reed, Judy, and Brent.

As his lifesaving message spread, he and his words became part of a watch and warning effort in other parts of the world. Examples:

- In 1975, he conducted a Saudi Arabia Civil Defense Survey.
- In 1977, he helped organize the first International Conference on Hurricanes, from which the present National Hurricane Conference evolved.
- In 1989, he helped Charleston, S.C. organize the cleanup after Hurricane Hugo.

In 1996, Wade Guice took a medical leave before the hurricane season began. He was diagnosed with the first signs of cancer. He died in 1998, and as I understand it, he declined radiation and chemotherapy as the disease progressed, preferring to live life to its fullest despite his illness. He even predicted his own death to coincide with the 27th anniversary of Camille. He missed it by just one day.

On that day, he told his family whom he loved quite dearly, "I am ready now for the greatest adventure of all times."

A few weeks before his death, I was privileged to meet him at Point Cadet in Biloxi and shake his hand for the last time. Had I not known, I would never have guessed that he was ill at all. He had that warm and genial smile of a well man.

It is a tribute to the leadership of Harrison County that they were able to retain the services of so brilliant a mind in the face of mankind's inevitable tragedy. Though they may not be aware of it, it is through Wade Guice's workable warning that many of us are alive at this moment. Remember the candles, the radios, and the first aid kit – but remember too the tidal wave – and what it can do.

And above all, never forget Wade Guice. He has probably saved your life many times over, depending on how many hurricanes you were able to physically avoid – simply by following his safeguard advise – Evacuate!

Though we may not be aware of it, through Wade Guice's workable warning many of us are alive today – simply by following his safeguard advise – Evacuate!

About Jimmie Bell

Jimmie Bell, was a reporter for the *Dailey Herald* and later for the *Sun Herald* newspapers. Besides being a newspaper editor for 12 years, he also is a free-lance writer for numerous periodicals and journals. In 1989, he published his own version of a Camille Memorial Book – *"Camille: The Flash-Back - 1969"*

Today Jimmie produces and distributes periodic subscription reportings known as *"Courthouse Records Bulletin"* – a semi-monthly journal of legal, financial, and business interest. As a poet, he publishes a nationally distributed quarterly booklet known as *"Bell's Poet Letters"* – and he is well known for his newsletters entitled *"A Century of Memories"* as well as his *"Four Quarters."*

Un-retiring Jimmie has five children and 13 grandchildren and may be contacted at POB 2187, Gulfport, MS, 39505

Hurricanes are Costly

Insurance and Loss Projections

If a storm similar to Hurricane Camille struck the Coast today, it would find residents better prepared, better insured and living in stronger homes. The are of concern, however, remains with the senior citizens and the newcomers who may be less prepared to protect their homes and to heed emergency instructions.

Camille flattened 68 square miles of beachfront in 1969. That area today includes 10 casinos, which have invested $3 billion in hotels, casino barges and parking garages.

Camille flattened 68 square miles of beachfront in 1969. That area today includes 10 casinos, which have invested $3 billion in hotels, casino barges and parking garages.

On a positive note, Camille became a benchmark which resulted in many changes as to how government and private agencies provide intervention services for emergency aid. Camille was so chaotic and so intrusive, that monies were handed out in the form of "blank checks" which were freely disbursed with little or no accountability.

Emergency Aid agencies learned many lessons that have since, generated new contingency plans and better information bases.

Some of the changes included Mandatory Evacuation, National Flood Insurance programs, the establishment of FEMA, and residential "buy-backs" in flood-prone areas.

Loss Comparisons

To gauge today's damage resulting from a similar storm as Camille, imagine a 25-foot wall of water – with 10-foot waves on top – pounding against the shoreline. "If another Camille hit the Gulf Coast, it would absolutely break a number of insurance companies," said Mississippi Insurance Commissioner George Dale, who weathered the 1969 storm in Moss Point High School, where he was assistant principal.

More homes and businesses, however, have been built along the vulnerable beachfront areas. Devastation would be far more costly than the $1.5 billion - in 1969 dollars – that was caused by the August 17th storm.

More homes and businesses, however, have been built along the vulnerable beachfront areas.

Pass Christian's loss of nearly 400 homes in 1969, represented more than a quarter of the houses in that city at the time. That the Pass now has about 3,500 households, such a storm as Camille, would conceivably destroy nearly 900 of that number.

As of this writing, 163 insurance companies write policies in Mississippi, but only six are available on the Coast – "and one of them writes a quarter of all homeowners' policies," said Dale. "I remember after Camille when people on the Coast couldn't get insurance because no one would write it," said Dale.

National Flood Insurance Program

The National Flood Insurance Program was created as a result of the U.S. Senate hearings after Camille. In its design, the federal government insures homes in flood-prone zones. In 1998, alone, the National Flood Insurance Program paid losses of $295 million for Hurricanes Frances and Georges.

Needless to say, since Hurricane Camille, insurance premiums have risen due to inflation and rising home values. "But, despite the $3 billion in insured losses caused by the recent Hurricane Georges, the Coast has not seen a recent rise in insurance premiums," said Ron Hanna, deputy commissioner of the state Insurance Commission.

"There have been some small increases in premiums on the Gulf Coast since Hurricane Georges, but one company has also filed for a rate decrease." continued Hanna.

On a good note, new homes built following the 1969 catastrophe have a greater chance of surviving such a major storm. "Prior to Hurricane Camille, there were no building codes," said Linda Rouse, Harrison County Civil Defense Director. "Houses are better prepared for storms," she said, adding that evacuation is still necessary. "That doesn't mean people can stay in them during a storm."

Harrison County Civil Defense director, Linda Rouse stated that, Prior to Hurricane Camille, there were no building codes, Houses are better prepared for storms, but evacuation is still necessary."

The building boom that is accompanying the casino industry has inspired builders to risk building on beachfront lots. "What we had along the beachfront was no really large hotels," said Rouse. "We didn't have a lot of the large restaurants as we have now. "Everybody wants to live right on the water. That's the worst place to be when a storm comes in."

Beachfront homes and areas of low-lying waterfront lots are often raised on stilts t meet the FEMA requirements which are now placed in effect with the revised building codes. Additionally, lower walls of raised homes are built to collapse if storm tides wash beneath the house. This remedy allows homes to survive the ravages of the more severe storms. However, contrary to this design, Rouse stated, "I don't know that would hold in a direct storm surge."

Homes on the Coast now are required to withstand a 100-mph wind. To meet these requirements, new building techniques and building materials are used, said Bruce Allen, building inspector for the City of Gulfport. The new rules will reduce damage from a storm. "Whatever they put up, glazing or shingles, is supposed to withstand a storm of 100 mph," said Allen. "We are requiring hurricane clips and rafter clips, which secure the roofing structure to the walls. In this last little storm, (Hurricane Georges) we didn't have nearly the damage we thought we were going to have."

Additionally, federal and state emergency management agencies (FEMA) have new construction standards for houses in flood zones. While building standards would protect many homes during smaller storms, a hurricane similar to Camille would have more buildings to attack.

"The Coast has grown dramatically in the last six or seven years. There's more here to be damaged," said state Rep. Danny Guice Jr., Gulf Coast director of the Associated General Contractors of Mississippi.

Further Considerations

- In 1992, Hurricane Andrew caused $16 billion in insured damages and left 100,000 homeless as it roared across south Florida. The $1.5 billion in Camille damage 30 years ago translates into $6.8 billion in 1999 dollars. However, by comparison to today's growth and expansion, there was definitely less to destroy back then.

- "If we have a Category 5, it doesn't make any difference how anything is built. We're gone," said Calvin Foster of Sawyer Insurance Co. in Gulfport in a 1994 interview. As a result, some businesses and homeowners are paying more to get wind insurance. Property owners who once had $1,000 deductibles are now settling for a $10,000 deductible. The owners of some beachfront mansions have had to accept $50,000 deductibles on their insurance policies.

Property owners who once had $1,000 deductibles are now settling for a $10,000 deductible.

- In 1989, Wade Guice said that building costs had risen from $20 to $25 per square foot in 1969 to $55 to $110 per square foot today. Building costs for some casinos have been $200 per square foot. The Coast would be rebuilt after a major storm, but progress would be slow, due to a lack of construction workers. "The only problem would be finding the people to rebuild it," said Guice.

- **The Domino Effect on Casinos?**

A Category 5 (winds of 155-mph or higher, with a storm surge of 18-feet or higher) hurricane likely would destroy casino barges while leaving heavily damaged casino hotels standing, said Bruce Nourse, regional director of government affairs for Casino Magic.

"We can't moor our vessels any better than they are," said Nourse, a Coast native who remembers Camille and believes the gambling industry would rebuild after a similar storm. Having endured the 1969 storm, his perspective on the aftermath of a major hurricane is grim. "Those of us who were here have thought about it," he said. "I don't believe anyone who was not here could appreciate the total devastation."

After a devastating hurricane, Nourse believes the casino industry would lobby the Legislature to allow land-based casinos in the present casino hotels. "I don't believe anyone would push to move them inland," he said. The Coast's casino industry could find investors to fund rebuilding, said Nourse. "We would have the money to rebuild," he said. "All of us are maxed out in terms of insurance – and it's a proven market, so if we had to raise funds to rebuild, I believe the funds would be there."

- James L. Witt, Director of FEMA, (Federal Emergency Management Agency) stated that, "It's important that people living in harm's way understand there are actions they can take not only to help prepare for storms – but also to help prevent some of the storm damage from occurring at all."A national poll authorized by FEMA showed a general lacking in hurricane preparedness.

A Disaster Resistant Community

Linda Rouse, Civil Defense Director – Harrison County

Harrison County is Mississippi's Gulf Cost resort and gambling center. The County's 581 square miles are home to over 185,000 people, most of whom live in the five municipalities; Biloxi, Gulfport, Long Beach, Pass Christian, and D'Iberville. The county is part of the coastal plain along the shallow Mississippi Sound. Most urban development occurs along the two peninsulas fronting the Sound, that are separated from the rolling uplands to the north by the Back Bay of Biloxi and St. Louis Bay, and the low-lying areas in between.

With the introduction of casino gaming on the Gulf Coast in 1992, over 2 Billion dollars has been invested in new commercial construction, primarily along the shore of the Mississippi Sound. Many nationally known casino companies have developed facilities in this area. Industrial development has also accelerated with expansion of the port facilities at Gulfport, and Keesler Air Force Base, and the Naval Construction Battalion Center, which are major employers. Service and retail employment has kept pace with the primary industry employment, and residential construction has boomed. As a result, Harrison County has experienced a growth rate of 8 percent since 1990, and this rapid growth is projected to continue well into the coming century.

Linda Rouse, Harrison County Civil Defense

Civil Defense Officials

Hancock County CD
Director Lynette Carbon
508 Ulman Avenue
Bay St. Louis
467-9226

Harrison County CD
Gulf Port Court House
Director Linda Rouse
865-4002

Jackson County CD
Director Todd Adam
769-3111

City of Biloxi
Linda Atterberry,
Director
435-6157

Pass Christian 452-3311
Long Beach – 863-1556
Gulfport – 865-4002
D'Iberville – 865-4002

director went on to state that, "Hurricanes and flooding are the primary natural hazards affecting Harrison County. The coastline is quite vulnerable to hurricane storm surge. In this century, 11 hurricanes have directly impacted the County, including Hurricane Camille in 1969. This Category 5 hurricane created a storm surge 25 feet high, devastating Pass Christian and other areas of the County and resulted in 131 casualties, 41 missing, thousands of injuries, and hundreds of millions of dollars in damages."

Most of the urbanized portions of Harrison County are located in the Gulf Coast flatwoods, a low, essentially level strip of coastal lowlands.

Abundant drainage problems abound, and many areas are vulnerable to flooding from high tides and the four rivers that drain into the bays from the north. These include; the Wolf, the Tuxachanie, the Biloxi, and the Tchoutacabouffa.

With three hurricanes hitting the area since Camille, awareness of the hurricane hazard is fairly widespread. The Port, Naval and Air Force facilities, the tourism councils, and the casino industry have all shown sincere interest in improving disaster resistance while still accommodating substantial urban development. Harrison County and the cities of Gulfport, Biloxi, Long Beach, and Pass Christian have each established Hazard Mitigation Planning Councils composed of representatives from local government as well as business and industry. These councils are developing hazard mitigation plans and strategies and will be the primary vehicle for further developing private and public partnerships.

Reduced Flood Insurance Rates

All jurisdictions within Harrison County implement building codes and flood-plain management regulations in compliance with the National Flood Insurance Program. Three cities have adopted more stringent flood construction standards. Together with the hurricane awareness and preparedness programs implemented countywide, these higher standards have earned the communities reduced flood insurance rates under the Community Rating System of the NFIP. Biloxi and Pass Christian have received a Class 8 rating, resulting in a 10% rate reduction, while Gulfport is a Class 9, earning 5% savings.

Casinos Take Action

The casino industry has taken many special precautions to protect their waterfront investments. The state gaming laws allow "riverboat gambling," so each of the casinos are housed in buildings constructed on barges and attached to the adjoining hotel and restaurant facilities by adjustable ramps. Elaborate evacuation plans for hurricane and flooding have been developed and the vulnerable floating casinos are moored to withstand a Category 4 hurricane with 155 miles per hour winds and 15 foot tidal surge.

Emergency Information Network

The Sun-Herald, WLOX-TV-13, K-99 FM, and Dixie Directory established EIN (Emergency Information Network) as a means of improving communications and to provide better information from the news media to the general public and to local, state, and federal agencies during Hurricanes or other natural disasters.

Dial 822-9899 ext 6745 Hurricane Hotline
Dial 822-9899 ext 1300 School Closings

Also, for road closings, evacuation routes, school closings, supply availabilities, shelter information, and other emergency requirements.

Project Impact

Harrison County has completed an inventory of at-risk public facilities and has installed storm shutters on two critical facilities. Additional structural and non-structural retrofits are being planned.

The increasing number and severity of natural disasters over the past decade demands that action be taken to reduce the threat that hurricanes, tornadoes, severe storms, floods and fires impose upon the nation's economy and the safety of its citizens. With Project Impact-Building Disaster Resistant Communities, FEMA is changing the way America deals with disaster effects of natural disasters by taking actions that dramatically reduce disruption and loss.

This nationwide initiative, Project Impact, operates on this common-sense damage reduction approach, basing its work and planning on three simple principles: preventive action must be decided at the lowest level, private sector participation is vital, and long-term efforts and investments in prevention measures are essential.

There is no doubt that Project Impact is a common sense approach for the way America deals with disasters. The incentive is clear. A disaster resistant community is able to bounce back from a natural disaster with far less loss of property and consequently much less cost for repairs.

There are currently three officially designated Project Impact communities in the State of Mississippi. The city of Pascagoula on Mississippi's Gulf Coast was named in 1997, as one of the 7 nationwide pilot communities. The city of Madison in central Mississippi was named in 1998. Harrison County, also on the Mississippi's Gulf Coast was named in 1999, which includes the five municipalities.

"We can't stop natural disasters from occurring, but we can stop people and communities from becoming casualties.

Every one of us can take steps to prevent ourselves, our loved ones, our businesses and our communities from becoming disaster victims.

The good news is that lives can be saved, damage to property reduced, and economic recovery from disaster accelerated – by taking action BEFORE disaster strikes."

Linda Rouse

Hurricane Preparedness Fair
At the outset of the Year 2000 Hurricane season, Barnes and Noble book store took the initiative to promote hurricane awareness by leading the effort for a Hurricane Preparedness Fair. On hand were the coast's Civil Defense directors and the Hurricane Hunters from Keesler Air Force Base.

Evacuation

Getting people off the Coast will be tougher today than it was 25 years ago. In Harrison County, roads have scarcely improved since Camille. Interstate 10 has been finished, but an estimated 1.2 million south Louisianans could also jam it and its north bound arteries during an evacuation.

No new northern escape routes have been built that would ease a mass exodus. Except for the widening of Hwy 603 in Hancock County and the partially complete widening of Hwy 49 there are but few other projections.

The four-laning of Mississippi Hwy 67 has been promoted by several East Harrison County groups throughout past years as a north-south evacuation route for that area. Its proposed start date is sometime in 2001 with a completion contemplated in 2004. With extensions of Interstate I-110 out of D'Iberville and from Cowan-Lorraine Road, an interception is proposed to take place south of Perkinston – thereby merging with Hwy 49 and creating a possible further traffic slowdown.

It must be noted that West Harrison (Pass Christian and Long Beach) is left with low-lying two-lane routes that cross marsh, bayou, and river areas that can be quickly inundated by rising tides.

However, in the low-lying areas, the marsh waters do not always flood right away. The powerful hurricane winds will push the existing marshy area waters up the bayous, creeks, and rivers, while building up a high water-wall. Eventually, the shear weight of the retained water will

overcome the damming effect caused by the winds. Then the inland waters will slowly creep overland southward, and will inundate all low-lying areas in a community. This phenomena occurs throughout the inland waterways along the entire Gulf Coast.

THE TOLL OF PAST HURRICANES

Name	Date	Dead	Velocity	Damage
Andrew	August 1992	26	45 mph	$25-30 billion
Gilbert	October 1988	319	185 mph	$10 billion
Juan	October 1985	11	90 mph	$1.5 billion
Elena	September 1985	4	106 mph	$1 billion
Camille	August 1969	255	210 mph	$1.4 billion
Betsy	September 1965	75	145 mph	$1.4 billion
Audrey	June 1957	500	135 mph	$150 million

In the event of evacuation today, Coastians are faced with escaping low-lying lands by taking east or west destination routes. Because the roads cannot handle quick exodus traffic, it is more likely that 48 to 72 hour evacuation orders be issued.

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However, such a lead time can produce future apathy – as in the case of evacuation orders issued for 1998's Hurricane Floyd in Florida – the evacuation of Floridians was ultimately not necessary – since "Floyd" left Florida untouched.

In another instance, many Mississippi Coastians forced to evacuate during 1998's Georges – sought refuge in Alabama and Tennessee only to become imperiled once more by Georges' easterly turn once it hit land.

Without hotel or other accommodation reservations, too often a lot of time is consumed by Evacuees seeking lodging. When lodging and sheltering is filled, it would be most helpful to the hapless evacuee if community officials placed "No Vacancy" signs along highway routes. This would tend to keep traffic moving more orderly towards other refuge centers.

Complacency

William Gray at Colorado State University in Fort Collins, Colorado, is the nation's preeminent hurricane forecaster.

Famous for his forecasting accuracies, Gray is worried that the public has been lulled into a sense of complacency. "The young people and retired people who moved to Florida in recent years don't understand the threat because there haven't been many major storms since 1960," he said. Now, with thousands of new homes built along the coast, Gray says the region is entering a period of more intense storms. "That's why we are going to see more hurricane damage than ever before." Still, Gray says, "I think people wanting to live along the coast is fine. – But they must be willing to pay for it."

Profile of a Hurricane

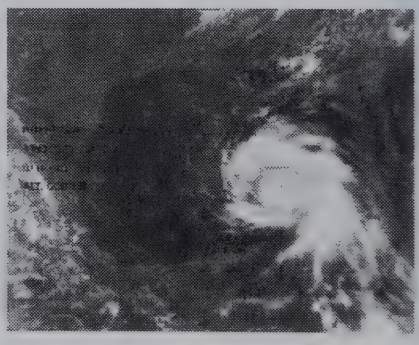
Embryonic Growth

The early beginnings of a hurricane storm appears as a whirlpool upon the sea of awful violence. Its hurricane force winds cover thousands of square miles, and tropical storm force winds--winds of 34 to 63 knots--cover areas ten times larger. Along the contours of its spiral rainbands are dense clouds from which torrential rains fall. These spiral rainbands ascend in decks of cumulus and cumulonimbus clouds that reach up to the high upper atmosphere. There, water vapor is condensed and swept off as ice-crystal wisps of cirrus clouds by the high-altitude winds. Lightning glows in the rainbands, and this cloudy mass is whipped into turbulence.

At the lower levels, where the hurricane is most intense, winds on the rim of the storm follow a wide pattern, like the slower currents on the rim of a whirlpool. Much like those currents, these winds accelerate as they approach the central vortex. This inner band is called the eye-wall, where the inflow of moist air enters and is funneled upward, and thereby releases heat that perpetuates and drives the storm This process may be compared to an engine which needs fuel in order to continue running.

In many hurricanes, these winds exceed 90 knots – and, nearly twice that in extreme cases. Hurricanes are known to have very low barometric pressures in the center. The Labor Day hurricane that struck the Florida Keys in 1935 had a central pressure of only 26.35 inches (892 millibars). And the change is often swift; pressure may drop an inch (3millibars) per mile. Hurricane Gilbert in 1988, went through a remarkable intensification period after its center crossed Jamaica. The pressure fell from 960 millibars (28.35 inches) to 888 millibars (26.22 inches) in 24 hours. This occurrence of change was observed by an NOAA aircraft on September 13, 1988 – this was the lowest sea level pressure ever recorded in the Western Hemisphere.

The Eye of the Hurricane is Chaotic.



It is encountered suddenly. From the heated tower of maximum winds and thunderclouds, one bursts into the eye, where winds diminish to something less than 15 knots. Penetrating the opposite wall, one is abruptly in the worst of winds again. A mature hurricane orchestrates as much as a million cubic miles of atmosphere.

Over the deep ocean, waves generated by hurricane winds can reach heights of 50 feet or more. Under the storm center, the ocean surface is drawn upward like water in a

straw, creating below it, a mound to be formed ranging from 1-3 feet higher than the surrounding ocean surface. This mound can translate into a coastal surge of 20 feet or more. Besides this surge, massive swells pulse out throughout its upper sea levels.

The Greatest Storm on Earth – A Hurricane

They are not the largest storm systems in our atmosphere, or the most violent; but they combine those qualities as no other phenomenon does – much as if their intended design was to be engines of death and destruction. Hurricanes are products of the tropical ocean and atmosphere, powered by heat from the sea, steered by the easterly trade winds, and the temperate westerlies, along with their own fierce energy.

Engines of death and destruction.

Around the core of a hurricane formation, winds blow with lethal velocity, the ocean develops an inundating surge, and as they move ashore, tornadoes may descend from the advancing bands of thunderclouds.

In Asia, the price in life paid to the hurricane has had biblical proportions. As late as 1970, cyclone storm tides along the coast of what is now Bangladesh killed hundreds of thousands of persons. An estimated 138,000 were killed in that region in 1991.

In August 1893 a storm surge drowned between one and two thousand people in Charleston, South Carolina. Just a couple of months later, in October 1893, nearly two thousand more perished on the Gulf Coast of Louisiana.

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Floods from 1974's Hurricane Fifi caused one of the Western Hemisphere's worst natural disasters in history, with an estimated 5,000 persons dead in Honduras, El Salvador, Guatemala, and Belize.

Costly Engines of Death and Destruction

In the United States, the hurricane death toll has been greatly diminished by timely warnings of approaching storms – but damage to fixed property continues to mount. In 1965, Hurricane Betsy caused about $6.5 billion in damages in Florida and Louisiana. Flooding from Hurricane Agnes in the populated northeast United States in 1972, totaled $6.4 billion. In 1989, Hurricane Hugo at $7 billion became the most costly hurricane when it struck South Carolina. Then Andrew smashed all records when it hit the densely populated coast of south Florida with more than $20 billion in property damage.

Places of Origin

Along the Atlantic and Gulf Coasts, the nominal hurricane season lasts from June 1 through November 31. Early in the season, the western Caribbean and Gulf of Mexico are the principal areas of origin. In July

and August, the main area of formation begins an eastward shift; by early September, a few storms are being born as far east as the Cape Verde Islands off Africa's west coast. Again after mid-September, most storms begin in the western Caribbean and Gulf of Mexico.

Frequency of Numbers

In an average year, more than 100 disturbances with hurricane potential are observed in the Atlantic, Gulf of Mexico, and Caribbean; but only about six mature into hurricanes. On average, two of these hurricanes strike the United States, where they kill from about 50 to 100 people somewhere between Texas and Maine and cause hundreds of millions of dollars in property damage. In a worse-than-average year, the same storms cause several hundred deaths and property damage totaling billions of dollars.

According to surveys made by Wade Guice, most death victims were due to drowning.

Monitoring and Measuring

For the National Oceanic and Atmospheric Administration (NOAA), the hurricane season means another hazard from the atmosphere at a time when tornadoes and floods and severe storms are playing havoc elsewhere on the continent. Meteorologists with NOAA's National Weather Service monitor the massive flow of data that might contain early indications of a developing storm somewhere over the warm sea. Cloud images from satellites, meteorological data from hundreds of surface stations, balloon probes of the atmosphere, and information from hurricane hunting aircraft are the tools of the hurricane forecaster.

The Storm Surge

The worst of a hurricane comes from the sea, in the form of a "Killer" storm surge that claims nine of ten victims in a hurricane.

It is a large dome of water often 50 to 100-miles-wide which sweeps across the coastline near where a hurricane makes landfall. The surge of high waters are further topped by devastating waves.

The stronger the hurricane and the shallower the offshore water, the higher the surge will be. Along the immediate coast, storm surge is the greatest threat to life and property. If the storm surge arrives at the same time as the high tide, the water height will be even greater. The storm tide is the combination of the storm surge and the normal astronomical tide.

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As the storm crosses the continental shelf and moves close to the coast, mean water level may increase 15 feet or more. The advancing storm surge combines with the normal astronomical tide to create the hurricane storm tide. This buildup of water level can cause severe flooding in coastal areas, particularly when the storm surge coincides with normal tides. Because much of the United States' densely populated coastline along the Atlantic and Gulf coasts lies less than 10 feet above mean sea level, the danger from storm surge is made more grave.

Wave and water-current action associated with the surge also causes extensive damage. Water weighs some 1,700 pounds per cubic yard – combined with the extended pounding by frequent waves can demolish any structure not specifically designed to withstand such force.

Furthermore, the water-currents as set up along the coast by the gradient in storm surge heights, and wind, combine with waves to severely erode beaches and coastal highways. The level of surge in a particular area is determined by the slope of the continental shelf. A shallow slope off the coast will allow a greater surge to inundate coastal communities.

Many buildings will withstand hurricane winds until their foundations are undermined by erosion, then they become weakened and fail. Storm tides, waves, and currents in confined harbors severely damage ships, marinas, and pleasure boats. In estuarine and bayou areas, intrusions of salt water endanger the public health and create bizarre effects, such as salt-crazed snakes seeking to flee the flooded bayous.

Storm Tide Facts

Over 6,000 people were killed in the Galveston Hurricane of 1900-mostly by the storm tide.

- Hurricane Camille in 1969 produced a 25-foot storm tide in Mississippi.
- Hurricane Hugo in 1989 generated a 20-foot storm tide in South Carolina.

Hazards of Destruction

Hurricanes are unstable, unreliable, and have but a brief existence ashore, but can leave scars that never quite heal. The hand of Camille's wrath in 1969, left destruction that was seen along the Mississippi Gulf Coast until most recently. Most of a hurricane's destructive work is done by the general rise in the height of the sea called a storm surge. Hurricane winds are a force to be reckoned with by coastal communities deciding how strong their structures should be.

A threefold increase in wind-speed gives a ninefold increase in pressure. Against a walll of a building.

Added Pressure by Winds

As winds increase, pressure against objects is added at a disproportionate rate. Pressure force, applied against a wall, mounts with the square-of-wind-speed, so that a threefold increase in wind-speed gives a ninefold increase in pressure. Thus, a 25 mph wind causes about 1.6 pounds of pressure per square foot. A four by eight sheet of plywood will

be pushed by a force of 50 pounds. However, with 75 mph winds, that force becomes 450 pounds, and in 125 mph winds, it becomes 1,250 pounds. For some structures, this force is more than enough to cause failure and destruction.

Tall structures, like radio towers, can be destroyed by gusty hurricane force winds. Winds also carry a barrage of debris that can be quite dangerous. All of wind damage does not necessarily come from the hurricane alone. As the storm moves shoreward, interactions with other weather systems can produce tornadoes that work around the fringes of the hurricane. Although hurricane-spawned tornadoes are not the most violent form of these whirlwinds, they, nevertheless, have added to the loss toll that is caused by a hurricane.

Rain and Flooding

Floods from the hurricane rainfall are quite destructive. A typical hurricane brings 6 to 12 inches of rainfall to the area it crosses, and some have brought much more. The resulting floods have caused great damage and loss of life, especially in the mountainous area where heavy rains mean flash floods. The most widespread flooding in the United States history was caused by the remnants of Hurricane Agnes in 1972. Rains from the dying hurricane brought disastrous floods to the entire Atlantic tier of states, causing 118 deaths and some $2.1 billion in property damage. Also Tropical Storm Claudette (1979) brought 45 inches of rain to an area near Alvin, Texas, contributing to more than $600 million in damage. Long after the winds of Hurricane Diane (1955) subsided, the storm brought floods to Pennsylvania, New York, and New England that contributed to nearly 200 deaths and $4.2 billion in damage.

The Landward Thrust

The hurricane tends to survive while it is over warm water – but its onward thrust is determined by the forces that drive the storm ashore or over colder water beyond the tropics, where in both cases, it will weaken and die.

This thrust – its path away from the tropics – is the clockwise curve that takes typhoons across the coastlines of Japan and into the Asian mainland and the Atlantic hurricanes into eastern United States.

Even before a hurricane forms, the embryonic storm has forward motion driven by the easterly flow in which it is embedded. As long as this westerly drift is slow--less than about 20 knots – the young hurricane

may intensify. More rapid forward motion generally inhibits intensification in the storm's early stages. Entering the temperate latitudes, some storms may move along at more than 50 knots, but such fast-moving storms soon weaken.

Temperatures control its Existence

At middle latitudes, the end usually comes swiftly: colder air penetrates the cyclonic vortex; the warm core cools and acts as a thermal brake on further intensification. Water below 80 degrees Fahrenheit does not contribute much energy to a hurricane. Even though some large hurricanes may travel for days over cold north Atlantic water, all storms are doomed once they leave the warm tropical waters that sustain them. The farther they venture into higher latitudes, the less fuel they receive from the sea. This lack of fuel finally reduces and kills off the storm's ability to continue on.

Over land, hurricanes break up rapidly. Cut off from their oceanic source of energy and with the added effects of frictional drag, their circulation rapidly weakens and becomes more disorganized. Torrential rains, however, may continue even after the winds are diminished. In the southeastern United States, about a fourth of the annual rainfall comes from dissipating hurricanes.

Hurricane Categories

The Saffir/Simpson Hurricane Scale

All hurricanes are dangerous, but some are more so than others. The way storm surge, wind, and other factors combine determines the hurricane's destructive power. To make comparison easier, and to make the predicted hazards of approaching hurricanes clearer to emergency forces, the National Oceanic and Atmospheric Administration's hurricane forecasters use a disaster-potential scale which assigns storms to five categories. Category 1 is a minimum hurricane; category 5 is the worst case. The criteria for each category are shown below. This can be used to give an estimate of the potential damage and flooding expected along the coast with an approaching hurricane.

Most Intense U.S. Hurricanes

Hurricanes (Location)...Year...and	Category
1. FL-(Keys) 1935	Category 5
2. **CAMILLE**-(LA/MS) 1969	Category 5
3. ANDREW 1992	Category 4
4. FL-(Keys)/S TX 1919	Category 4
5. FL-(Lake Okeechobee) 1928	Category 4
6. DONNA-(FL/Eastern U.S.) 1960	Category 4
7. TX-(Galveston) 1900	Category 4
8. LA-(Grand Isle) 1909	Category 4
9. LA-(New Orleans) 1915	Category 4
10. CARLA-(TX) 1961	Category 4
11. HUGO-(SC) 1989	Category 4
12. FL-(Miami) 1926	Category 4

Category ONE

Winds 74-95mph: No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal road flooding and minor pier damage.

Category TWO

Winds 96-110mph: Some roofing material, door, and window damage to buildings. Considerable damage to vegetation, mobile homes, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of center. Small craft in unprotected anchorages break moorings.

Category THREE

Winds 111-130 mph: Some structural damage to small residences and utility buildings with a minor amount of curtain-wall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures with larger structures damaged by floating debris. Terrain lower than 5 feet above sea level may be flooded inland 8 miles or more.

Category FOUR

Winds 131-155 mph: More extensive curtain-wall failures with some complete roof structure on small residences. Major erosion of beach areas. Major damage to lower floors of structures near the shore. Terrain continuously lower than 10 feet above sea level may be flooded requiring massive evacuation of residential areas inland as far as 6 miles.

Category FIVE

Winds greater than 155 mph: Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Major damage to lower floors of all structures located less than 15 feet above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5 to 10 miles of the shoreline may be required.

Understanding Hurricanes

Hurricanes – a Perennial Problem

The permanent populations of the hurricane prone coastal counties of the United States continue to grow at a rapid rate. When weekend, seasonal, and holiday populations are considered, the number of people

on barrier islands, such as at Ocean City, Maryland; Gulf Shores, Alabama; and Padre Island, Texas; increase by ten to one-hundred-fold or more. Also, these areas are subject to inundation from the rapidly rising waters, known as storm surge, associated with hurricanes that generally result in catastrophic damage and potentially large losses of life. Over the past several years, the warning system has provided adequate time for the great majority of the people on barrier islands and along the immediate coast to move inland when hurricanes have threatened. However, it is becoming more difficult each year to evacuate people from these areas due to roadway systems that have not kept pace with rapid population growth.

It is becoming more difficult each year to evacuate people from these areas due to roadway systems that have not kept pace with rapid population growth.

This condition results in the requirement for longer and longer lead times for safe evacuation. Unfortunately , these extended forecasts suffer from increasing uncertainty. Furthermore, rates of improvements in forecast skills have been fairly outpaced by rates of population growth in areas vulnerable to hurricanes.

The combination of the growing populations on barrier islands, coastal regions, and other vulnerable locations – and the uncertainties in the forecast – poses major dilemmas for forecasters and local and state emergency management officials alike. How do you prevent complacency caused by "false alarms" and yet provide adequate warning times?

Evacuation Costs and False Alarms

Preparations for hurricanes are expensive. When a hurricane is forecast to move inland on a path nearly normal to the coast, the area placed under warning is about 300 miles in length. The average cost of preparation, whether the hurricane strikes or not, is more than $50 million for the Gulf Coast. This estimate covers the cost of boarding up homes, closing down businesses and manufacturing plants, evacuating oil rigs, Gaming Casinos, etc. It does not include economic losses due to disruption of commerce activities, such as sales, tourists canceling reservations, etc.

In some locations, the loss for the Labor Day Weekend alone can be a substantial portion of the yearly income of a coastal business. An example of such losses were experienced along the Florida Panhandle during Hurricane Elena in 1985. If the width of the warned area has to be increased by 20 percent because of greater uncertainties in the forecast, the additional cost for each event would be $10 million. If uncertainties in the hurricane strength require warning for the next higher category of hurricane strength, then major increases in the number of people evacuated and reparation costs would be required. Of course, if

In the case of Galveston/Houston area, an increase in storm strength from a category 2 hurricane to a category 3 hurricane on the Saffir/Simpson Scale would require the evacuation of an additional 200,000 people.

these uncertainties meant that major metropolitan areas, such as Galveston/Houston, New Orleans, Tampa, Miami, Biloxi/Gulfport, or a number of other major coastal cities, would or would not be included in the warning area, the differences in preparation costs would be substantially more than the $10 million. Also, the number of people evacuated would be substantially more than the tens of thousands of people.

For instance, in the case of Galveston/Houston area, an increase in storm strength from a category 2 hurricane to a category 3 hurricane on the Saffir/Simpson Scale would require the evacuation of an additional 200,000 people. Likewise, if major industrial areas, such as Beaumont/Port Arthur, Texas, or tourist areas, such as Atlantic City, New Jersey were affected by these uncertainties, the financial impact would be quite large.

In the case of the Galveston-Houston area, an increase in storm strength from a category 2 hurricane to a category 3 hurricane would require the evacuation of an additional 200,000 people.

Credibility vs Precaution

Economic factors receive serious consideration from the National Hurricane Center and local and state officials not only for direct, but also for indirect effects on people response. People will not continually take expensive actions that, afterwards, prove to have been unnecessary. If consistently over-warned by wide margins, people will cease to respond, and such actions could result in an extraordinary loss of life. To maintain credibility with the general public, the National Hurricane Center and local and state officials cannot treat all hurricanes as if they were Camilles, Hugos, or Andrews. Such an exaggerated approach may indeed provide maximum protection of life for a given event, but it endangers many more lives the next time when the threat may be even greater.

Complacency

Finally, the hurricane problem is compounded by the fact that 80 to 90 percent of the people who live in hurricane-prone areas have never experienced the core of a major hurricane. Many of these people have been through weaker hurricanes or been brushed by the fringe of a major hurricane. The result is a false impression of the damage potential of these storms. This frequently breeds complacency and delayed actions that could result in the loss of many lives. An example of the potential danger are those people living on barrier islands who might be reluctant to evacuate under "blue sky" conditions until they see the actual threat. The result could be people trapped in those areas as waters cut off escape routes. This situation nearly happened for about 200 people on Western Galveston Island during Hurricane Alicia in 1983.

This type of response primarily results from three major factors. First, major hurricanes are frequently events for any given location. Second, for the past three decades, major hurricanes striking the United States coast have been less frequent than for the previous decades. Finally, it has been during this period of low hurricane activity that the great majority of the present coastal residents moved to the coast.

However, with the tremendous increase of populations in high-risk areas along our coastlines, the concern is that we may not fare as well in the future when hurricane activity inevitably returns to the frequencies experienced during the 1940s-1960s.

A quote from Dr. Robert C. Sheets (former Director of National Hurricane Center)..."If a major storm strikes a coastal metropolitan center this year, the risk of fatalities is high because the endangered population will face congested evacuation routes, insufficient escape time, and has too little experience in hurricane survival. It is imperative that coastal residents and visitors alike take the threat seriously, acquaint themselves with hurricane safety rules, and evacuate immediately if advised to do so."

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Hurricane Warning System

Hurricane Forecasters and Hunters

The day is past when a hurricane could develop to maturity far out to sea and go undetected until it thrusts toward land. Earth-orbiting satellites operated by the National Oceanic and Atmospheric Administration (NOAA) keep the earth's atmosphere under virtually continuous surveillance, night and day. Long before a storm has evolved, scientists at NOAA's National Hurricane Center in Miami, Florida have begun to watch the disturbance. Of the satellite data coming from polar-orbiting and geostationary spacecraft – and in reports from ships and aircraft, they look for subtle clues that mark the development of hurricanes, such as cumulus clouds covered by the cirrostratus deck of a highly organized convective system; showers that become steady rains; dropping atmospheric pressure; and the intensification of the tradewinds, or a westerly wind component.

Probing the Hurricane's Eye

When a disturbance blooms into a tropical storm, it then warrants being named. With the naming of a storm pattern, a signal is set, which then kicks-in an elaborate warning system to that of readiness. Long-distance communications lines and preparedness plans are flexed.

As an Atlantic hurricane drifts closer to land, it comes under surveillance by weather reconnaissance aircraft of the U.S. Air Force Reserve, the famous "Hurricane Trackers." These manned flights bump through the turbulent interiors of the storms to obtain precise fixes on the position of the eye and to measure winds and pressure fields. Despite the advent of satellites, these aircraft probings result in providing the most detailed quantitative information that hurricane forecasters can receive. The hurricanes are also probed by the "flying laboratories" from NOAA's Aircraft Operations Center in Miami. Finally, the approaching storm comes within the range of a radar network stretching from Texas to Maine and from Miami to the Lesser Antilles. Increasingly, that network is dominated by "Doppler radar," capable of giving precise position data as well as measurements of wind-speeds and rainfall.

"Doppler radar" is capable of giving precise position data as well as measurements of wind-speeds and rainfall.

Storm Tracking and Reporting

Through the lifetime of the hurricane, advisories from the National Hurricane Center give the storm's position and what the forecasters in Miami expect the storm to do. As the hurricane drifts to within a day or two of its predicted landfall, these advisories begin to carry "watch" and "warning" messages, telling people when and where the hurricane is expected to strike and what its effects are likely to be.

The first hurricane warning in the United States was flashed in 1873, when the Signal Corps warned against a storm approaching the coast between Cape May, New Jersey and New London, Connecticut.

Not until the storm has decayed over land and its cloudy elements and great cargo of moisture have blended with other brands of weather does the hurricane emergency end.

Once the winds of a tropical storm reach 74 miles per hour, a hurricane is born – then, they are named.

Improved Knowledge

This system works exceedingly well. The death toll in the United States from hurricanes has dropped steadily as NOAA's hurricane tracking and warning apparatus has matured. However, even though the accuracy of hurricane forecasts has improved over the years, any significant improvements must come from quantum leaps in scientific understanding.

The forecasters also know that science will never provide a full solution to the problems of hurricane safety. The rapid development of America's coastal areas has placed millions of people with little or no hurricane experience in the path of these lethal storms. For this vulnerable coastal population, the answer must be community preparedness and public education in the hope that education and planning before the fact will save lives and lessen the impact of the hurricane and what its effects are likely to be.

Local Civil Defense
For this vulnerable coastal population, the answer must be community preparedness and public education in the hope that education and planning before the fact will save lives and lessen the impact of the hurricane and what its effects are likely to be.

Hurricane Reconnaissance

Speed, Intensity, and Direction

Aerial weather reconnaissance is vitally important to forecasters at the National Hurricane Center. Reconnaissance aircraft penetrate to the core of the storm and provide detailed measurements of its wind field as well as an accurate location of its center. Such information gained is usually not available from any other source. This information helps the meteorologist determine what is going on inside a storm as it actually happens.

Aircraft data coupled with data from satellites, buoys, and land and ship reports, makes up an important part of the information available to the hurricane specialists for their forecast of speed, intensity, and direction of movement of the storm.

The Storm Trackers

The National Hurricane Center is supported by specially modified aircraft of the (USAFR) U.S. Air Force Reserve and the (NOAA) National Oceanic and Atmospheric Administration's (AOC) Aircraft Operations Center.

The USAFR crews known as the *"Storm Trackers"* and are part of the 815 Tactical Airlift Squadron, is based at Keesler Air Force Base near Biloxi, Mississippi. They fly the Lockheed WC-130 *"Hercules,"* a four-engine turboprop aircraft which carries a crew of six people and can stay aloft for up to 14 hours.

The NOAA flies Lockheed WP-3 *"Orions,"* another four-engine turboprop that carries a crew consisting of from seven to seventeen persons and can remain aloft for up to 12 hours. The NOAA/AOC aircraft and crews are based at Miami International Airport.

Both of the above units can be deployed as needed in the Atlantic, Caribbean, Gulf of Mexico, and the Central Pacific Ocean.

Meteorological information obtained from aerial reconnaissance includes such data as: winds, pressure, temperature, dew point temperature, and location of the storm center. A parachute-borne weather sensor that can be dropped from a plane – measures the storm characteristics below the aircraft. Data from the storm environment is available as often as once every minute. This information provides a detailed look at the structure of the storm and a clear indication of its intensity.

Alert and Ready

All crew members are highly trained specialists. Loose objects are tied down or stowed away, and crew members wear seat belts and safety harnesses. Once the aircraft's radar detects the storm, the crew determines the easiest way to invade its periphery. In a well developed storm, this can be a difficult challenge. Winds at flight level often exceed 100 miles an hour, and the wall cloud surrounding the center can be several miles thick. Rain often comes in torrents, and updrafts are usually strong and frequent.

Inside the "eye," however, the conditions are very different; many times the ocean is visible and there is blue sky and sunshine above. The flight level winds are nearly calm. Often the wall cloud appears to present a stadium effect with the green turf below and the sky above.

Flight Borne

Both the WC-130 *"Hercules"* and the WP-3 "Orion" operate most efficiently at altitudes of 24,000 to 30,000 feet. Since most storms occur some distance from the aircraft's home station, the crew usually flies to the storm as high as they can because this helps to conserve fuel. About 200 miles from the storm, the aircraft descends to its storm operating level. If the storm is in its infancy, such as a "depression" or "tropical storm" having winds that are less than 50 mph, then the crew operates as close to the surface of the sea as can be safely accomplished – usually at about 1,500 feet. If the storm is more fully developed, either defined as hurricane strength or a strong tropical storm, then the aircraft flies a designated pattern by penetrating the storm center at an altitude of 10,000 feet. A typical mission will last from 10-12 hours during which time the crew will penetrate the center of the storm from 3 to 6 passes. When its mission is completed, the aircraft will climb back to a higher altitude for the trip home.

NOAA ushered in the 1997 hurricane season with a high-flying new twist. The National Hurricane Center held its annual briefing away

from home at NOAA's Aircraft Operations Center at MacDill Air Force Base in Tampa, Florida. Its newest high-tech forecasting tool was introduced – a *"Gulfstream-IV"* high-altitude jet for hurricane surveillance operations. This jet was designed to improve hurricane landfall and intensity predictions by up to 20 percent. Its mission is to fly above and around hurricanes at altitudes up to 45,000 feet. The data collected supplements the low and mid-altitude data collected by NOAA P-3 and Air Force WC-130 aircraft, giving up a more comprehensive and complete picture of the atmosphere – "in, over, and around" a developing hurricane. This unit, under the "Chief of Aerial Reconnaissance Coordination of All Hurricanes" is known by the acronym CARCAH – will transmit to the world-wide meteorological community through both military and civilian communication circuits.

The threat of hurricanes along coastal areas has increased because more people live there. Tools such as the new G-IV jet that help forecasters predict the track of hurricanes will help coastal residents prepare...but these tools are only part of the equation.

The Hurricane Hunters

A group of pilots called the *Hurricane Hunters* actually fly directly into hurricanes! The 53rd Weather Reconnaissance Squadron, known as the *Hurricane Hunters,* are part of the Air Force Reserve. They fly right into the eye of the hurricane to get detail information.

The *Hurricane Hunters* use WC-130 aircraft on their weather missions. The planes have a six-person crew that includes the aircraft commander, co-pilot, flight engineer, navigator, weather officer and a dropsonde system operator.

The dropsonde system operator releases the dropsonde - a weather-sensing canister attached to a small parachute. This canister radios back to the aircraft information on the temperature, humidity, pressure and winds inside the storm. This weather information is processed aboard the aircraft and transmitted by satellite to the National Hurricane Center.

The first mission to check a new hurricane is flown at a low-level altitude, generally between 500 and 1,500 feet. Later, as the storm builds in strength, the flights are at higher altitudes. The planes fly right into the storm - not above it! The ride can get quite bumpy as the area around

Captain Frederick J. Joss was the weather officer aboard a WC-130B Hurricane Hunter aircraft that penetrated Camille twice on August 16, 1969. Ten years later, he recalled, "My impressions are still vivid, from abut 300 miles out, we were flying in clouds. As we approached to within 40 or 50 miles, I saw my absolute altimeter began to unwind and thought it was acting up. We punched in from the northeast side. That is usually the strongest quadrant, but radar had showed no soft spots. The thing was solid. The turbulence was not marked but there was a great deal of lightning and the rain washing over the airplane was phenomenal. I've never seen it rain harder before or since."

It was quite beautiful, the best-formed storm I've ever seen. The eye was about eight miles in diameter and it was clean inside. I could see sky above and the sea below. Like so many things in nature, a hurricane is an awesome thing."

the eye is usually surrounded by a solid ring of thunderstorms called the eyewall. Sometimes the clouds and rain are so thick the aircraft's wings are barely visible to the crew.

53rd Weather Reconnaissance Squadron

The 53rd Weather Reconnaissance Squadron is a component of the 403rd Wing located at Keesler Air Force Base in Biloxi, Mississippi. It is a one-of-a-kind and the only flight unit in the world that flies into hurricanes on a routine basis.

The mission of the *Hurricane Hunters* is to recruit, organize and train assigned personnel to perform aerial weather reconnaissance. During the hurricane season from June 1st to November 30th, they provide surveillance of tropical disturbances and hurricanes in the Atlantic (west of 55W), Caribbean, and Gulf of Mexico for the National Hurricane Center in Miami, Florida. They may also fly storms for the Central Pacific Hurricane Center in Honolulu, Hawaii.

From November 1st, through April 15th, the unit also flies winter storms off both coasts of the United States in support of the National Center for Environmental Prediction. These missions are flown at high altitudes (30,000 feet), and can be just as challenging as hurricane missions – with turbulence, lightning and icing that takes place at such altitudes.

The job of tying the reconnaissance effort together rests with a small group of former Air Force people assigned to the Hurricane Center.

Aircraft Specifications

To perform their mission, the *Hurricane Hunters* have ten WC-130H aircraft. These 1965 model C-130 *Hercules* aircraft are adapted for the weather reconnaissance role from a search and rescue version HC-130.

Not Without Risk

Aerial weather reconnaissance flights during one of nature's most destructive forces are not without risk. In September 1955, a Navy P2V and its crew of nine, plus two Canadian newsman, were lost in the Caribbean Sea while flying and reconnoitering Hurricane Janet. Three Air Force aircraft have also been lost while flying through typhoons over the Pacific.

Flying into a hurricane is a unique experience. Weather crew members who have flown combat missions say that their feelings before both missions were similar. There is a blend of excitement and apprehension. Adding to the tension is the knowledge that no two hurricanes are alike. Some are gentle while others are like raging bulls. Preparations for flying into a hurricane must be coordinated and thorough.

National Weather Service

The history of the Weather Service over the past century would be bland indeed without a detailed account of the growth of the Nation's hurricane warning service. Today, the hurricane warning and forecast service stands as the finest of its kind in the world, distinguished by its character, credibility, and the confidence that our Nation has in it. But that was not always the case.

Its History – Calamities and Frustration

The Weather Bureau was created as a civilian agency in 1890, mainly because of a general dissatisfaction with weather forecasting as performed by the military. The hurricane of 1875 that destroyed Indianola, Texas, without much warning – was a major contributing factor.

It was not until the Spanish American War of 1898, that an effort was made to establish a comprehensive hurricane service. President McKinley stated that he was "more afraid of a hurricane than he was of the Spanish Navy." He extended the warning service to include warnings for shipping interests as well as the military.

Before that, hurricane warnings were only issued for the United States coastal areas. After that, hurricane warning stations were established throughout the West Indies – and a forecast center was established in Kingston, Jamaica, that was later moved to Havana, Cuba in 1899. This warning service was extended to Mexico and Central America.

The last hurricane-hunting plane to brave Camille limped to Texas with one engine dead and the other failing. With that, the Hurricane Center in Miami warned the Coast: "Never before has a populated area been threatened by a storm as extremely dangerous as Camille."

Recognition of the international responsibility for the United States hurricane warning service continues today under the auspices of the World Meteorological Organization of the United Nations.

In 1900, the infamous Galveston hurricane that killed 6,000 people, is known as the greatest natural disaster in United States history. There was no formal hurricane warning, and this calamity prompted the transfer of the warning service to Washington, DC, where it remained until 1935.

Continued Disasters

In the 1920's, there were several hurricanes that hit with little or no warning that further led to dissatisfaction with the hurricane service out of Washington. The coastal communities felt that Washington was insensitive to its hurricane problem. In 1926, a very strong hurricane (category 4 by today's standard) brought great devastation to southeast Florida, including Miami and Ft. Lauderdale – causing more than 200 deaths.

The warnings for that storm were issued at night when most

residents were asleep – thus, unaware of the rapidly approaching hurricane. In 1928, another severe hurricane hit south Florida and killed an estimated 1,800 people – drowned when Lake Okeechobee overflowed.

In 1933, the largest number of tropical storms-21- developed. Nine of them were hurricanes and two had affected the east coast of the United States, including Washington. These, also, were badly forecast and with untimely warnings.

In the next year,1934, a forecast and warning for an approaching hurricane in the very sensitive Galveston, Texas area was also seriously flubbed by the Washington weather offices.

Reorganization

Those incidents led Congress and the President to revamp and decentralize the hurricane warning service. Improvements included 24-hour operations with teletypewriter hook-ups along the Gulf and Atlantic coasts; weather observations at 6 hourly intervals; hurricane advisories at least four times a day; and a more adequate upper air observing network.

New hurricane forecast centers were established at Jacksonville, Florida; New Orleans, Louisiana; San Juan, Puerto Rico; and Boston, Massachusetts.

In 1943, the primary forecast office at Jacksonville was moved to Miami where the Weather Bureau established a joint hurricane warning service with the Army Air Corps and the Navy under the direction of Grady Norton.

In 1943, Col. Joseph Duckworth made the first reconnaissance flight into the eye of a hurricane.

It was also in 1943, that Col. Joseph Duckworth made the first intentional plane reconnaissance into the eye of a hurricane. The following year, regular aircraft reconnaissance was begun by the military giving hurricane forecasters the location and intensity of the storms for the first time.

Grady Norton continued as head of the Miami Center until 1954, during Hurricane Hazel which had ravaged the east coast of the United States. Norton established a strong and popular reputation as an extraordinary forecaster with the tremendous ability to communicate with residents along the hurricane vulnerable coastlines. Gordon Dunn, who served as Norton's assistant in Jacksonville, was selected as Norton's successor, and the Miami Office was officially designated as the National Hurricane Center in 1955.

Expansion Realized

In the 1950s, a number of hurricanes in addition to Hazel struck the east coast, causing much damage and flooding. Congress responded with increased appropriations to strengthen the warning service and intensify research into hurricanes. The Weather Bureau organized the National

Hurricane Research Project under the direction of Dr. Robert H Simpson. The Air Force and the Navy provided the first aircraft to be used by the project to investigate the structure, characteristics, and movement of tropical storms.

In 1960, radar technology became capable of seeking out distances that ranged from 200 to 250 miles. Coastal sites were established at strategic locations along the Atlantic and Gulf coasts; ranging from Maine to Brownsville, Texas.

On April 1, 1960, the first weather satellite was placed in orbit giving hurricane forecasters the ability to detect storms before they hit land.

Boosting Education and Awareness

Gordon Dunn retired in 1967 and was succeeded by Dr. Simpson, who placed a renewed emphasis on research and development at the Center through satellite applications and the development of statistical and dynamic models as forecast aids. Dr Simpson retired after the 1973 season and was succeeded by his Deputy, Dr. Neil Frank, who served until 1987. Dr. Frank's tenure was marked by great emphasis on the need for hurricane preparedness along the hurricane-prone communities in the United States as well as in the Caribbean. He and his staff created an increased national awareness of the hurricane threat through the cooperation of local and state emergency officials and the enlistment of the news media and other Federal Agencies in the campaign to substitute education and awareness for the lack of first-hand experience among the ever increasing populations.

In 1998, Jerry D. Jarrell became the sixth director of the National Weather Service's Tropical Prediction Center – National Hurricane Center in Miami, Florida.

New Technology on the Horizon

The future holds even greater promise to improve the hurricane warning capability of the National Weather Service. New technology and advances in the science under the Weather Service's modernization program now underway will lead to improvement and more effective warning and forecasting of hurricanes.

The next GOES series of satellites is expected to provide more accurate and higher resolution sounding data than presently available from geosynchronous satellites, and similar improvements can be expected from the polar orbit satellite systems.

Doppler radar systems are now an integral part of the National Oceanic and Atmospheric Administration. The Administration's research aircraft operations now provide entire data fields within several miles of the aircraft's path.

Major improvements in longer range hurricane forecasts (36-72 hours) will come through better quality and quantity of observations and improved dynamic models. Global, hemispheric, and regional models show considerable promise. Present operational reconnaissance aircraft provide invaluable data within the core of the hurricane.

Doppler radar systems are now an integral part of the National Oceanic and Atmospheric Administration. The Administration's research aircraft operations now provide entire data fields within several miles of the aircraft's path.

The Doppler Effect

The Austrian scientist Christian Doppler explained in 1842 that when one stands near a railroad listening to the sound of a train passing, the train sounds different as it approaches than it does as it recedes. This change is known as the *"Doppler Effect."* It occurs when the sound waves produced by an approaching object are compressed into a higher wave frequency (producing a higher pitch), while those of a receding object are lengthened, producing a lower wave frequency (and lower pitch). This same principle applies to the frequency of radio waves returning to a radar antenna.

Therefore, through the *"Doppler Effect,"* a physical phenomena is marked by a change in frequency. Depending on the motion of an object toward or away from a point, radar can give a picture of the winds within a storm. If, within a small area, high winds toward the radar are adjacent to high winds away from the radar, a circulation has developed and forecasters are better prepared to issue a warning. By example, with this capability, tornado warning lead times have increased in the last 10 years from less than 5 minutes to nearly 12 minutes.

Doppler Radar

Doppler Radar research began at NSSL back in the mid-1960's. During the 70's it was found that Doppler Radar would greatly benefit the National Weather Service and could help to provide much improved severe thunderstorm and tornado warnings.

With Doppler radar, the speed of a precipitation particle is determined by the difference in the frequency shift between the moving particles. When the particles move perpendicular to the radar, the radar does not measure the speed of the particles because the change in the frequency shift is zero. Therefore, the only complete wind measurement on Doppler radar that is significant, is when the precipitation particles move away from or toward the radar device.

NEXRAD

NEXRAD (Next Generation Radar) will add new dimensions to hurricane warning capabilities, which will further provide much needed information on tropical cyclone wind fields and their changes as they move inland. Local offices will be able to provide more accurate short-term warnings as rainbands, high winds, and possible tornadoes move toward specific inland locations where heavy rains and flooding frequently occur over widespread inland areas.

The new Radar, (NEXRAD) Next Generation Radar (officially called WSR-88D), provides forecasters with a detailed look at storms through reflectivity and velocity displays. Reflectivity indicates rainfall or precipitation intensity and velocity displays the speed and direction of the winds within the storm.

Improved observing systems and anticipated improvements in analysis, forecasting, and warning programs require efficient accessing, processing, and analysis of large quantities of data from numerous sources. These data also provide the opportunity for improved numerical forecasts.

Improvements in analysis, forecasting, and warning programs require efficient accessing, processing, and analysis of large quantities of data from numerous sources.

Wave-Current Information Systems

WAVCIS (Wave-Current Information Systems) is designed to provide information on off-shore wave heights. In 1999, Technicians from LSU's Coastal Studies Institute fabricated two monitoring stations that were placed in the Gulf off the coast of Terrebonne Bay in Louisiana, in an endeavor to help fill an information gap necessary to more accurately predict an approaching hurricane's impact on low-lying lands.

The instrument arrays are attached to offshore oil rigs designed to withstand the strongest hurricanes. Each is "a stand-alone system" with its own power source and communication link with feed back to computers at LSU – and which data results are available hourly on the Internet. With the additional data, LSU's Natural Systems Engineering Laboratory can predict more accurately what areas will flood. Each station costs about $100,000 per installation and about $50,000 a year to operate.

Wave measurement offers crucial information to people in low-lying areas about what will happen in the next two or three days.

The ability to add-in wave conditions offshore will help to determine what areas might be flooded, and at what point – as a storm approaches. This will help planners to order evacuations more efficiently and to better estimate how long each parish's (county's) evacuation routes will continue above water.

In addition to more real-time data available for storm response – the system can provide an archive of sea conditions that could be used to monitor the millions of dollars in coastal restoration projects being built each year. The stations can also tell oil spill responders about water currents along the surface of the ocean as well as currents on the bottom that move tar balls that sink.

New Computer Modeling as a Forecasting Aide

The Class VII computer at NCEP will permit operational implementation of next generation hurricane prediction models. Additional products will be provided to users in order to optimize the desired response. AWIPS (Advance Weather Interactive Processing System) will be the primary tool for accomplishing this task.

Critical hurricane information needed by local, state, and other Federal agencies, as well as the private sector, will be displayed graphically and transmitted to the user faster and more complete than ever before, making a more effective warning and evacuation response.

The future of the Nations's hurricane warning and forecast service is brighter than ever before!

Hurricane Check Lists

Hurricane Safety Check List

- Be Prepared BEFORE the Hurricane Season.
- Know the storm surge history and elevation of your area.
- Learn safe evacuation routes to inland destinations.
- Learn the location of the nearest official shelters.
- Review needs and working conditions of emergency equipment, such as flashlights, battery-powered radios, etc.
- Ensure that enough non-perishable food and water supplies are on hand to last for at least 2 weeks.
- Obtain and store materials, such as plywood and plastic, necessary to properly secure your home.
- Check home for loose and clogged rain gutters and downspouts.
- Keep trees and shrubbery trimmed. Cut weak branches and trees that could fall or bump against the house. When trimming, try to create a channel through the foliage to the center of the tree to allow for air flow.
- Determine where to move your boat in an emergency.
- Review your insurance policy to ensure that it provides adequate coverage.
- Individuals with special-needs should contact their local office of emergency management.
- For information and assistance about any of the above, contact your local National Weather Service, Emergency Management Office, Local or County Civil Defense Office, or the nearest American Red Cross Chapter.

When a "Hurricane WATCH" is issued:

- Frequently monitor radio, TV, NOAA Weather Radio, or hurricane hotline telephone numbers for official bulletins of the storm's progress.
- Fuel and service family vehicles.
- Inspect and secure mobile home tie downs.
- Prepare to cover all window and door openings with shutters or other shielding materials.
- Check food and water supplies.
- Have clean, air-tight containers on hand to store at least 2 weeks of drinking water(14 gallons per person).
- Stock up on canned provisions.
- Get a camping stove with fuel.
- Keep a small cooler with frozen gel packs handy for packing refrigerated items.
- Check prescription medicine – obtain at least a 10-day to 2-weeks supply.
- Stock up on extra batteries for radios, flashlights, and lanterns.
- Prepare to store and secure outdoor lawn furniture and other loose, lightweight objects, such as garbage cans, garden tools, potted plants, etc.
- Check and replenish first-aid supplies.
- Have on hand an extra supply of cash money.

When a "Hurricane WARNING" is issued:

- Closely monitor radio, TV, NOAA Weather Radio, or hurricane hotline telephone for official bulletins.
- Follow instructions issued by local officials. Leave immediately if ordered to do so.
- Complete preparation activities, such as putting up storm shutters, storing loose objects, etc.
- Evacuate areas that might be affected by storm surge flooding.
- If evacuating, leave early (if possible, in daylight).
- Evacuate from mobile homes immediately.
- Notify neighbors and a family member outside of the warned area of your evacuation plans.

If Evacuating: (plan to evacuate if you...)

- Live in a mobile home. Do not stay in a mobile home under any circumstances. They are unsafe in high wind and/or hurricane conditions, no matter how well they are fastened to the ground.
- Live on the coastline or on an offshore island, or live near a river or in a flood plain.
- Live in a high-rise condominium or apartment building. Hurricane

winds are stronger at higher elevations. Glass doors and windows may be blown out of their casings and weaken the structure.

- Stay with friends or relatives or at a low rise inland hotel or motel outside of flood zones. Leave early to avoid heavy traffic, roads blocked by early flood waters, and bridges impassible due to high winds.
- Put food and water out for your pet if you cannot take it with you. Public shelters do not allow pets nor do most motels/hotels.
- Hurricane shelters will be available for people who have no other place to go.
- Shelters may be crowded and uncomfortable, with no privacy and no electricity.
- Do not leave your home for a shelter until government officials announce on the radio and/or television that a particular shelter is open.

What to Bring to a Shelter:

- First-aid Kit
- Medicine
- Baby Food and Diapers
- Cards
- Games
- Books
- Toiletries
- Battery-powered Radio
- Flashlight(per Person)
- Extra Batteries
- Blankets or Sleeping Bags
- Identification, Valuable Papers(insurance,) And Cash.

If Staying at Home: Reminder!

- Only stay at home if you have not been ordered to leave. If you ARE told to leave, do so immediately.
- Store water:
- Fill sterilized jugs and bottles with water for a 2-week supply of drinking water.
- Fill bathtub and large containers with water for sanitary purposes.
- Turn refrigerator to maximum cold and open only when necessary.
- Turn off utilities if told to do so by authorities.
- Turn off propane tanks.
- Unplug small appliances.
- Stay inside a well constructed building. In structures, such as a home, examine the building and plan in advance what you will do if winds become strong. Strong winds can produce deadly missiles and structural fracture.

If winds become strong:

- Stay away from windows and doors even if they are covered. Take refuge in small interior room, closet, or hallway.
- Take a battery-powered radio, a NOAA Weather Radio, and a flashlight with you to your place of refuge.
- Close all interior doors.
- Secure and brace external doors, particularly double inward opening doors and garage doors.
- If you are in a two-story house, go to an interior first-floor room or basement, such as a bathroom, closet, or under the stairs.
- If you are in a multiple-story building and away from the water, go to the first or second floors and take refuge in the halls or other interior rooms away from windows. Interior stairwells and the areas around elevator shafts are generally the strongest part of a building.
- Lie on the floor under tables or other sturdy objects.
- Be alert for tornadoes which often are spawned by hurricanes.

Remember!

If the "EYE" of the hurricane should pass over your area, be aware that the improved weather conditions are temporary and that the storm conditions will return with winds coming from the opposite direction sometimes in a period of just a few minutes.

After the storm passes:

- Stay in your protected area until announcements are made on the radio or television that the dangerous winds have passed.
- If you have evacuated, do not return home until officials announce your area is ready. Remember, proof of residency may be required in order to re-enter evacuation areas.
- Avoid using candles and other open flames indoors.

Beware of outdoor hazards:

1. Avoid downed power lines and any water in which they may be lying.
2. Be alert for poisonous snakes, often driven from their dens by high water.
3. Beware of weakened bridges and washed out roads.
4. Watch for weakened limbs on trees and/or damaged overhanging structures.
5. Do not use the telephone unless absolutely necessary. The system usually is jammed with calls during and after a hurricane.
6. Guard against spoiled food. Use dry or canned food. Do not drink or prepare food with tap water until you are certain it is not contaminated.
7. When cutting up fallen trees, use caution, especially if you use a chain saw.
8. Serious injuries can occur when these powerful machines snap back or when the chain breaks.

Books by Dan Ellis:

Diamondhead Jubilee, 1995, rev. 1997, History of Diamondhead, MS. Includes neighboring communities. 156 pp., $19.95.

Pass Christian Discovered, 1996, 300 year history of Pass Christian celebrating the Tricentennial, 120 pp., $19.95.

Hancock County – Bay St. Louis Discovered, 1997, 300 year history of Hancock County and its cities and communities, 172 pp, $19.95

Kiln Kountry – Home of Brett Favre, 1998, the first European settlers in the early 1800s to current period including the old Kilns, Moonshining, and Brett Favre, 120 pp., $19.95.

Gulfport Discovered, 1998, 100 year history of the Port of Gulfport, and the city from which it came. 145 pp., $19.95.

Mississippi Gulf Coast, 1999, Panorama of history and culture of the cities along the Harrison County Gulf Coast and the Back-Bay towns and cities. 68 pp., $8.95. (Size = 41/4x51/2)

Slidell – Camellia City, 1999, details the early Bonfouca area and West Florida connection with the Gulf Coast, beginning with the early railroad and logging period to current. Includes its neighboring communities, 198 pp., $19.95.

Pass Christian – Historic District and Lost Mansions, 1999, Full Color depicting all residences along the Scenic Drive and Beach Boulevard of the Nationally Registered Historic District. Includes early old hotels and mansions which have been lost to hurricanes or calamity. 100 pp. $35.00 (Special numbered Limited Edition)

All About Camille, July 2000, details the path and occurrences of Hurricane Camille, the stories of destruction within each of the coastal cities. Describes hurricanes and how they take place, tracking, reconnaissance, and the national, state, and county agencies that are affected. Includes a Tribute to Wade Guice, and more than 200 photos. 155 pp. $19,95.

1960s – The National Scene
Vietnam War
Desegregation Processes
Solid Democratic South
Pelicans eliminated by DDT
Hippies, Drugs, Anti-Establishment
Computer technology advances
Neil Armstrong on the Moon
Cuban Skyjackings – epidemic
Ted Kennedy's Chappaquiddick
Charles Manson's Sharon Tate
Earl Ray's Martin Luther King
Sirhan Sirhan's Robert Kennedy
Draft Evaders to Canada
Coeducational Dormitories
Beatles and Woodstock
NASA's Hancock Test Facility
Hurricane Camille

1970s – The Local Scene
New Hospital at Gulfport
New Hospital at Biloxi
New Sheraton hotel completed
Gulf Islands National Seashore established
Buccaneer State Park at Waveland
Navy Oceanographic Office at NASA
U.S. Navy beachfront Home
USM Gulf Park
William Cary College
Hancock County Park Bienville
DuPont plant at DeLisle

1980s
Interstate 10 – 77-mile-stretch completed
Interstate 110 span to US 90 completed
Gulfport/Biloxi Regional Airport expansion
Hancock Bank 15-story complex
US Navy Homeport at Jackson County
Europa Gambling Cruises to No-Where

1990s
Dockside Gaming legalized
Hancock and Harrison approved gaming
Isle of Capri, President, Biloxi Belle
Casino Magic opened in Hancock
Keesler Air Base expanded
Walter Anderson Museum
George E. Ohr Museum
Coliseum Expansion
Port of Gulfport expansion
Gulfport/Biloxi Regional Airport expansion
Edgewater Mall Expansion
Municipal Industrial Park expansions
New Retail Complexes completed
More than 2000 Hotel/Motel rooms added
New Casinos and expansions completed

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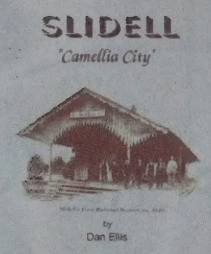
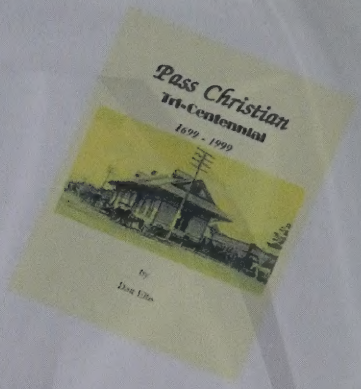
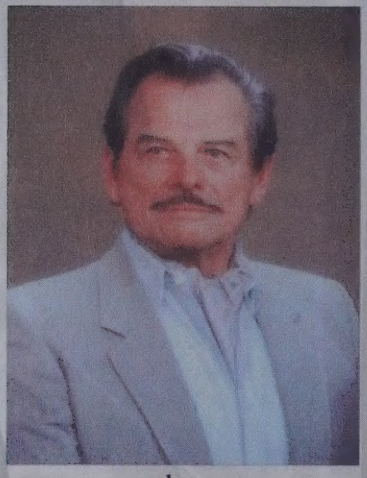
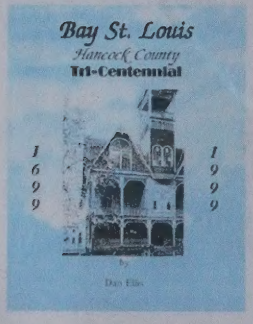
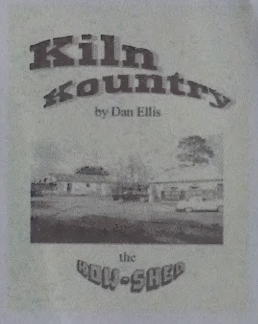




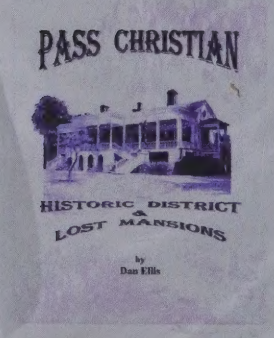
HISTORY BOOKS

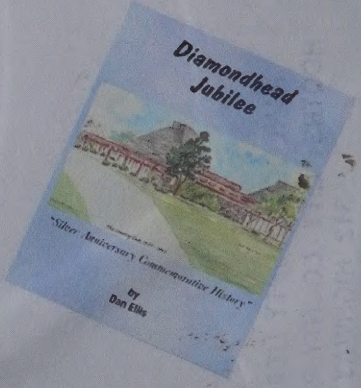






by
Dan Ellis
228-452-3138





danellis@datasync.com
danellis3@juno.com
WebSite is DanEllis.net